GVM-1411QM

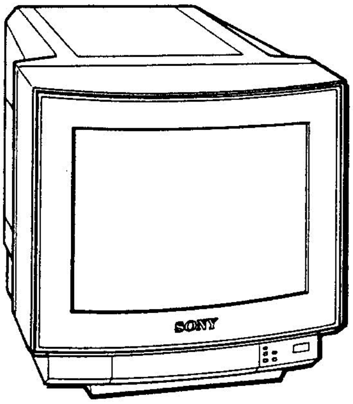
5865

RM-787

SERVICE MANUAL

AEP Model

Chassis No. SCC-D42B-A



SPECIFICATIONS

Colour systems	PAL, SECAM, $NTSC_{3.58}$ and $NTSC_{4.43}$ systems
Picture tube	Trinitron tube Anti-glare dark screen Approx 35.56 cm (14 inches) picture measured diagonally, 90-degree deflection AG Pitch 0.25 mm
Resolution	Video inputs: 600 TV lines RGB inputs: 1024 dots × 768 lines
Colour temperature	9300 K + 8MPCD
Frequency response	8 MHz(-6 dB, composite video) 30 MHz(-3 dB, RGB)
Linearity	Horizontal: less than ±5% Vertical: less than ±5%
Line full range	Composite video input Horizontal: 15.625 kHz ±500 Hz Vertical: 50 - 60 Hz RGB input Horizontal: 15 to 36 kHz Vertical: 50 to 100 Hz
Overscan of the picture	Composite video input less than +7% RGB input Horizontal: -7% to +5% variable Vertical: -7% to +5% variable
Audio	0.5 W monaural
Inputs	VIDEO IN (LINE A): BNC connector(1) composite video, 1 Vp-p ± 3 dB, sync negative, automatic termination at 75 ohms Y/C IN (LINE B): 4-pin, mini-DIN (1) Y(luminance signal): 1 Vp-p, sync negative, 75-ohm termination switchable C (chrominance signal): 300 mVp-p (PAL) 286 mVp-p (NTSC) (burst signal), 75-ohm termination switchable RGB A: D-sub 9-pin connector (1, female) Analog RGB: 0.7 Vp-p, 75 ohm terminated Digital RGB : TTL level RGB B: D-sub 25-pin connector (1, male) Analog RGB: 0.7 Vp-p, 75 ohm terminated Digital RGB: TTL level

– Continued on page 2 –

TRINITRON® COLOR VIDEO MONITOR

SONY®

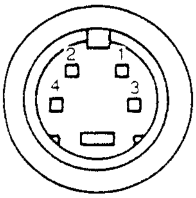
MICROFILM

	AUDIO IN (LINE A/LINE B/RGB A): phono jack (3) -5 dBs, high impedance CONTROL S: minijack (1) RGB A SELECT: minijack (1)
Outputs	VIDEO OUT (LINE A): BNC connector (1) Y/C OUT (LINE B): 4-pin mini-DIN (1) AUDIO OUT (LINE A/LINE B): phono jack (2)
Power requirements	220 - 240 V AC, 50 - 60 Hz
Power consumption	0.65 A
Operating temperature range	0°C to 35°C (32°F to 95°F)
Humidity	0% - 90%
Dimensions	Approx. 379 × 365.1 × 411 mm (w/h/d) (15 × $14^{3}/_{8}$ × $16^{1}/_{4}$ inches)
Weight	Approx. 17 kg (37 lb 8 oz)
Accessory supplied	AC power cord (1)
Optional accessories	Display stand SU-552W Remote control unit RM-787 Earphone ME-20

Design and specifications subject to change without notice.

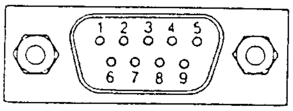
Pin assignment

Y/C (Y/C separate) IN connector (4-pin)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA-sub-carrier-input	300 mVp-p, burst signal (PAL)/286 mVp-p, burst signal (NTSC) Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	Ground
4	GND for CHROMA-input	Ground

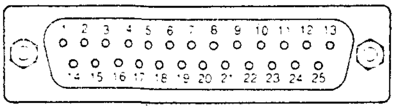
RGB multi connector (9-pin, female)



Pin No.	Signal				
	Analog	Digital 8-colour	Digital 16-colour	Digital 64-colour	Digital monochrome
1	GND	GND	GND	GND	GND
2	(NC)	(NC)	(NC)	r	(NC)
3	R	R	R	R	(NC)
4	G	G	G	G	(NC)
5	B	B	B	B	(NC)
6	(NC)	(NC)	I	g	I
7	(NC)	(NC)	(NC)	b	G
8	H/HV	H/HV	H/HV	H/HV	H/HV
9	V	V	V	V	V
Sync level	TTL level (Positive or Negative)	TTL level (Positive or Negative)	TTL level (H:Positive V:Positive)	TTL level (H:Positive V:Negative)	TTL level (H:Positive V:Negative)

GND: Ground R: Red G: Green B: Blue (NC): No connection
H: Horizontal sync V: Vertical sync HV: Composite sync I: Intensity
r: Secondary red g: Secondary green b: Secondary blue

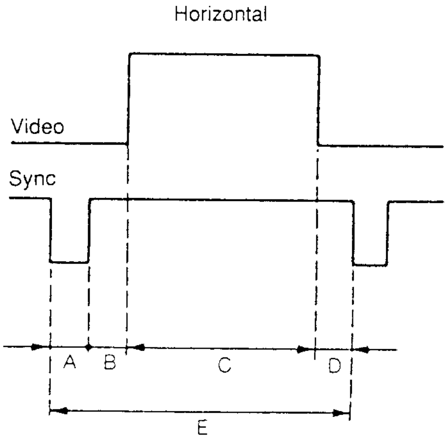
RGB multi connector (25-pin, male)

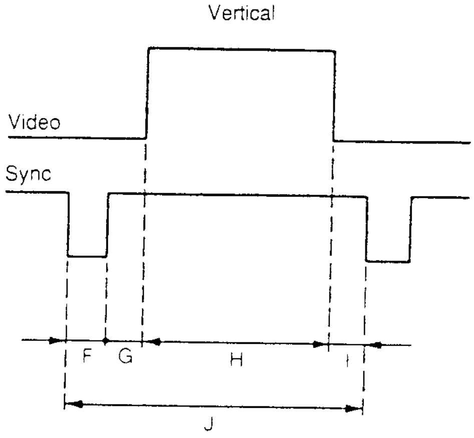


Pin No.	Signal	Signal level
1	IBM select	H (5 V): IBM mode L: 3 Bit TTL
2	Audio select	H (5 V or open): Audio inputs from #13 L (less than 0.4 V): Audio inputs from the LINE AUDIO IN jacks
3	Video input (composite video signal) H.sync or composite sync	When the high state is selected at #9: 1 Vp-p, 75 ohm terminated (Negative polarity sync), with the SUPERIMPOSE switch set to ON 1.2~4 Vp-p, 75 ohm terminated (Negative or Positive), with the SUPERIMPOSE switch set to OFF When the low state is selected at #9: TTL level
4	Blue input	Positive polarity When the high state is selected at #9: Analog signal (0.7 Vp-p, 75 ohm terminated, non sync 1 Vp-p, 75 ohm terminated, with sync on G signal) When the low state is selected at #9: Digital signal (TTL level)
5	Green input	
6	Red input	
7	NC	
8	NC	
9	Analog/digital mode select	H (open): Analog signal (0.7 Vp-p) L (ground): Digital signal (TTL level)
10	RGB B/NORMAL mode select (Function switch)	H (3 V to 12 V): Signal input from the 25 pin D-sub L (less than 2 V): Composite video inputs from LINE or Y/C input impedance more than 22 kilo ohms
11	V. sync	TTL level
12	Blanking input	When the high state is selected at #9: H (1 V to 3 V): RGB input from the 25 pin D-sub L (less than 0.4 V): Composite or Y/C video inputs, 75 ohm terminated (Rapid switch) When the low state is selected at #9: H (5 V or open): RGB input from the 25 pin D-sub L (ground): Composite video input from LINE VIDEO IN
13	Audio input	Input level –5 dBs (normal), input impedance more than 47 kilo ohms
14	EXT/INT video select	Functions with the SUPERIMPOSE switch set to ON. H (open): Sync signal input from #3 L (ground): Sync signal input from LINE or Y/ C
15	Video input return	
16	Blue input return	
17	Green input return	
18	Red input return	
19	Ground	
20	Video output (composite sync output)	Output level 1.0 Vp-p, within sync 0.3 Vp-p, output impedance 75 ohm
21	Video output return	
22	Audio common return	

Pin No.	Signal	Signal level
23	Audio output	Output level –5 dBs (normal), output impedance less than 10 kilo ohm
24	Blanking input return	
25	IBM luminance signal	Positive polarity When the high state is selected at #1: TTL level When the low state is selected at #1: Low state (GND)

Timing Chart





		CGA compatible	EGA compatible	VGA compatible			1024×768 Interlace
fH		15.68 kHz	21.86 kHz	31.47 kHz			35.52 kHz
A (µs)		4.45	4.92	3.81			3.92
B (µs)		8.03	1.65	1.91			1.25
C (µs)		44.83	39.32	25.42			22.81
D (µs)		6.47	–0.14	0.64			0.18
E (µs)		63.78	45.75	31.78			28.15
fV		60 Hz	60 Hz	60 Hz	70 Hz	70 Hz	87 Hz
F (ms)		0.19	0.60	0.064	0.064	0.064	0.113
G (ms)		2.11	0.10	1.02	1.08	1.87	0.5630.577
H (ms)		12.74	16.01	15.26	12.71	11.13	1081
I (ms)		1.64	0.04	0.349	0.416	1.206	0/0.014
J (ms)		16.68	16.75	16.69	14.27	14.27	11.50
Sync Polarity	H	+	+	–	–	+	+
	V	+	–	–	+	–	+

MEMO

SERVICE HINWEISE

ACHTUNG

DAS KÜHLBLECH Q612 IST AM PRIMÄRSTROMKREIS ANGESCHLOSSEN.
UM DIE GEFAHR EINES ELEKTRISCHEN SCHLAGES ZU VERMEIDEN, GEHEN SIE BEI SERVICEARBEITEN MIT GROSSER VORSICHT VOR.

Hinweis zum Netzstecker (bei der Verwendung in der Bundesrepublik)

In der Bundesrepublik verwenden Sie den von der Gebrüder Broghammer GmbH & Co. hergestellten Netzstecker (mit VDE-Genehmigung, DIN 49 441 Typ Nr. 636).

Zum sicheren Anschluß

(1) Knicken Sie die abisolierten Enden des Netzkabels um, stecken Sie die unverlöteten Teile in die Löcher, und drehen Sie die Schrauben zu. (Stecken Sie nicht die verlöteten Teile ein, da es sonst zu Wackelkontakten kommen kann.)
(2) Stellen Sie sicher, daß der Erdungsdraht des Netzkabels am Erdungskontakt angeschlossen ist.
(3) Vergewissern Sie sich nach der Befestigung noch einmal, daß sich die Drähte nicht berühren.
(4) Nach allen Anschlüssen setzen Sie das Netzkabel fest in den Stecker ein, um übermäßigen Druck auf jeden Anschlußpunkt zu vermeiden.
(5) Als letztes bauen Sie den Netzstecker richtig wie zuvor ein.

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

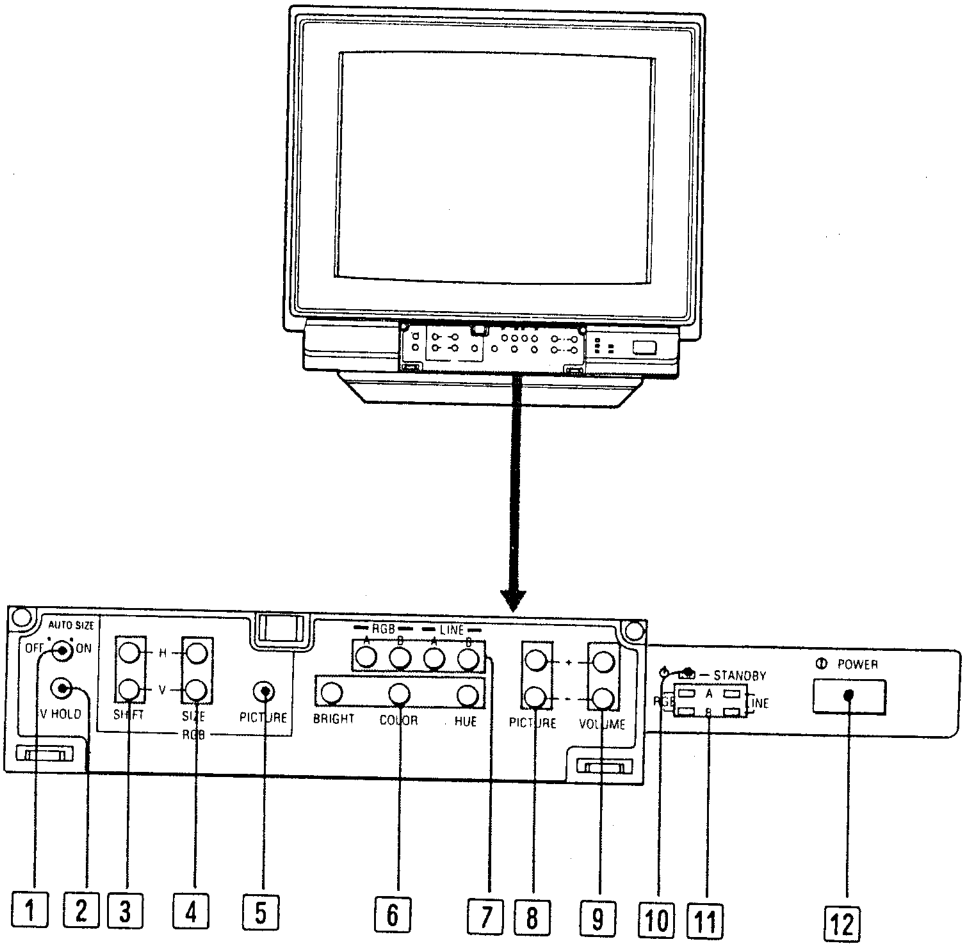
SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SECTION 1
GENERAL

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front panel


AUTO SIZE
OFF
ON
V HOLD
H
V
SHIFT
SIZE
RGB
PICTURE
RGB
LINE
A
B
A
B
BRIGHT
COLOR
HUE
PICTURE
+
-
VOLUME
STANDBY
RGB
A
B
LINE
POWER
1
2
3
4
5
6
7
8
9
10
11
12

1 AUTO SIZE switch (only RGB A input)

ON: The right picture size and center are fixed in the VGA modes. The H/V SIZE and H/V SHIFT controls do not work. For other modes, the picture size and center are not guaranteed.

OFF: The H/V SIZE and H/V SHIFT controls can be freely set. The VGA modes have the same picture size and center.

Note

The above does not apply to RGB B input.

2 V HOLD (vertical hold) control

If the video input picture rolls vertically, use this control to stabilize it.

Note

Control 2 does not function for RGB input pictures.

[3] RGB H/V SHIFT (horizontal/vertical shift) controls

Turn the H-SHIFT control to adjust the horizontal position of the RGB input picture, if it is off center. Turn it clockwise to shift the picture toward the right and counterclockwise to shift the picture toward the left.
Turn the V-SHIFT control to adjust the vertical position of the RGB input picture, if it is off center. Turn it clockwise to shift the picture upward and counterclockwise to shift the picture downward.

[4] RGB H/V SIZE (horizontal/vertical size) controls

Turn the H-SIZE control to adjust the horizontal size.
Turn the V-SIZE control to adjust the vertical size.

[5] RGB PICTURE control

Adjust this control if the picture level of RGB inputs differs significantly from that of video inputs.
Turn this control clockwise to make the contrast and colour intensity of the RGB input picture stronger, or counterclockwise to make them weaker.

Note

- Controls [3] to [5] function only for RGB input pictures. However, they do not function when the RGB B input is selected with the SUPERIMPOSE switch on the rear panel set to ON.
- When turning the controls [1] – [4], use the supplied screwdriver (attached to the panel cover).

[6] Picture adjustment controls

BRIGHT (brightness) control
Normally keep this control at the center detent position. Turn it clockwise to make the picture brighter or counterclockwise to make it darker.

COLOR control
Turn this control clockwise to make the picture more vivid or counterclockwise to make it paler.

HUE control
Functions for NTSC signal only.
Use this control to obtain the most natural skin tones. Turn it clockwise to add green to the skin tones or counterclockwise to add purple/red hues.

Note

The COLOR and HUE controls work for VIDEO signals only.

[7] Input select buttons

Press to select the input source to be monitored.

RGB A: for input signals fed through the RGB A connector and the RGB A AUDIO jack
RGB B: for input signals fed through the RGB B connector
LINE A: for input signals fed through the LINE A connectors
LINE B: for input signals fed through the LINE B connectors

[8] PICTURE +/– buttons

Press the + button to make the contrast and colour intensity stronger or press the – button to make them weaker.

[9] VOLUME +/– buttons

Press the + button for more volume or press the – button for less volume.

[10] STANDBY indicator

Lights when the power is turned off by remote control through CONTROL S signal.
While the unit is operating, this indicator functions as the response indicator.
It blinks when the VOLUME or PICTURE buttons are pressed.
It lights steadily at the highest or lowest level of volume or picture level.

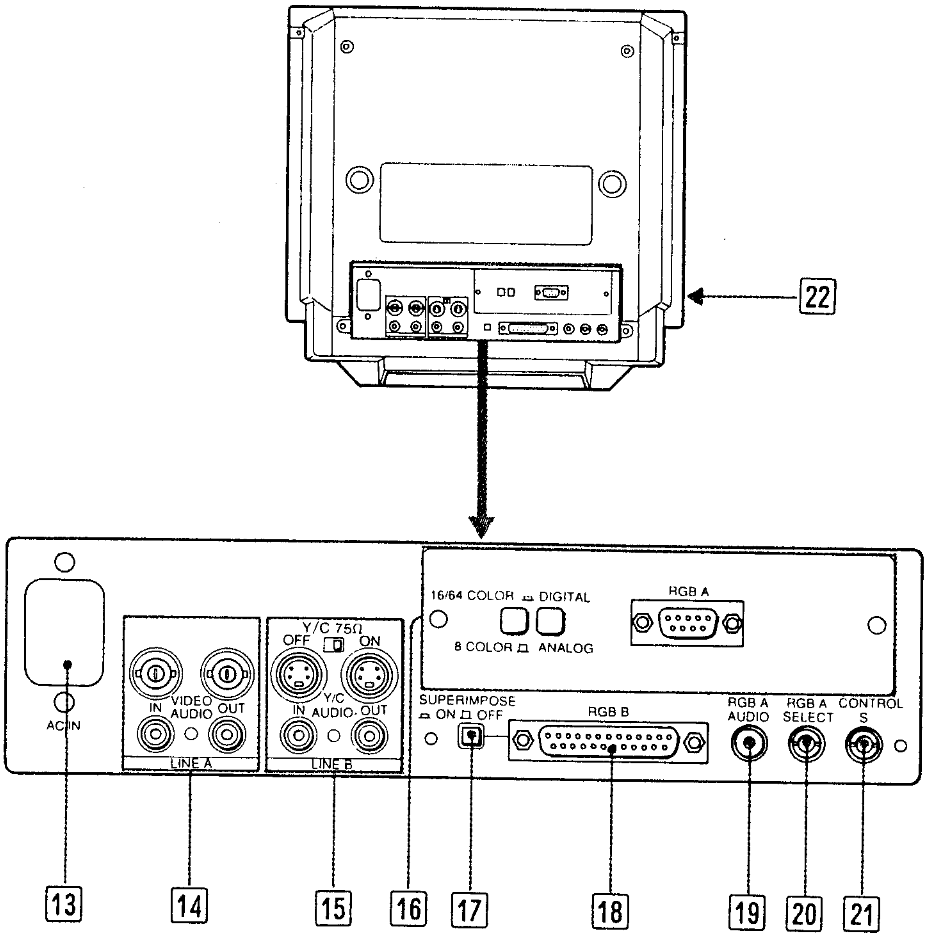
[11] Input select indicators (RGB A/RGB B/LINE A/LINE B)

When the input source is selected, the corresponding indicator lights.

[12] POWER switch

Depress to turn on the monitor. Press again to turn it off.

Rear


22
16/64 COLOR ⊏ DIGITAL
8 COLOR ⊐ ANALOG
RGB A
Y/C 75Ω
OFF
ON
VIDEO
IN
AUDIO
OUT
AC IN
LINE A
Y/C
IN AUDIO OUT
LINE B
SUPERIMPOSE
⊏ ON ⊐ OFF
RGB B
RGB A AUDIO
RGB A SELECT
CONTROL S
13
14
15
16
17
18
19
20
21

13 AC IN connector

Connect the supplied power cord.

14 LINE A connectors

To monitor the input signal fed through this line input, press the LINE A input select button on the front panel.

VIDEO IN connector (BNC type)
AUDIO IN jack (monaural) (phono type)
Connect to the video and audio outputs of video equipment such as VTRs or video disc players.
For a loop-through connection, connect to the video and audio outputs of another monitor.

VIDEO OUT connector (BNC type)
AUDIO OUT jack (monaural) (phono type)
For a loop-through connection, connect to the video and audio inputs of another monitor.
When a connecting cord is connected to the VIDEO OUT connector, the 75-ohm termination of the input is automatically released and the signal input to the VIDEO IN connector is output from this connector.

15 LINE B connectors

To monitor the input signal fed through this line input, press the LINE B input select button.

Y/ C 75Ω termination switch
When only the Y/C IN connector is connected (i.e. nothing is connected to the Y/C OUT connector), set this switch to ON.
When both Y/C IN and OUT connectors are connected together for a loop-through connection, set this switch to OFF.

Y/C IN connector (4-pin mini-DIN)
Connect to the Y/C output of video equipment.
AUDIO IN jack (monaural) (phono type)

Y/C OUT connector (4-pin mini-DIN)
For a loop-through connection, connect to the Y/C input of another monitor.
AUDIO OUT jack (monaural) (phono type)

16 RGB A interface unit

16, 64 COLOR/8 COLOR selector
Depress this selector when digital RGB equipment having 16- or 64-colour mode is connected to the RGB A connector. The 16- or 64-colour mode is automatically selected by sync polarity. Keep the selector released for digital RGB equipment having the 8-colour mode.

DIGITAL/ANALOG selector
Depress this selector when video equipment having digital RGB output is connected to the RGB A connector. Release the selector for equipment having analog RGB output.

RGB A connector (D-sub 9-pin, female)
Connect to video equipment having either digital or analog RGB output.
To monitor the input signal fed through this connector, press the RGB A input select button.

17 SUPERIMPOSE switch

Set this switch to ON (▭) to display the composite video signal from a laser disc player, etc., or to perform superimposition. In this case, the RGB H/V SHIFT, RGB H/V SIZE and RGB PICTURE controls do not function.
Set this switch to OFF (□) to display the RGB signal from a microcomputer, etc. In this case, the sync signal should be supplied to pin 3 (H. sync) or pin 11 (V. sync) of the RGB B connector.

Note

When the RGB B/NORMAL mode select signal is supplied to pin 10 of the RGB B connector with the SUPERIMPOSE switch set to ON, the previously selected LINE A or LINE B indicator lights together with the RGB B indicator.

18 RGB B Connector (D-sub 25-pin, male)

Connect to video equipment having either digital or analog RGB output.
To monitor the input signal fed through this connector, press the RGB B input select button.

19 RGB A AUDIO input jack (phono type)

Connect to the audio outputs of the RGB equipment connected to the RGB A connector.

20 RGB A SELECT connector (minijack)

When ground potential is applied to this connector, signal input from the RGB A connector will be monitored regardless of the setting of the input select buttons on the front panel. If a voltage of 5 V is applied to the connector or the circuit is open, the input signal selected with the input select buttons will be monitored.
This connector allows the input source monitored to be selected with external equipment.

21 CONTROL S input connector (minijack)

Connect to the CONTROL S output of video equipment. The power on/off, input selection, volume and picture settings can be remotely controlled through the equipment connected.
For connection, use a shielded cable.

Note

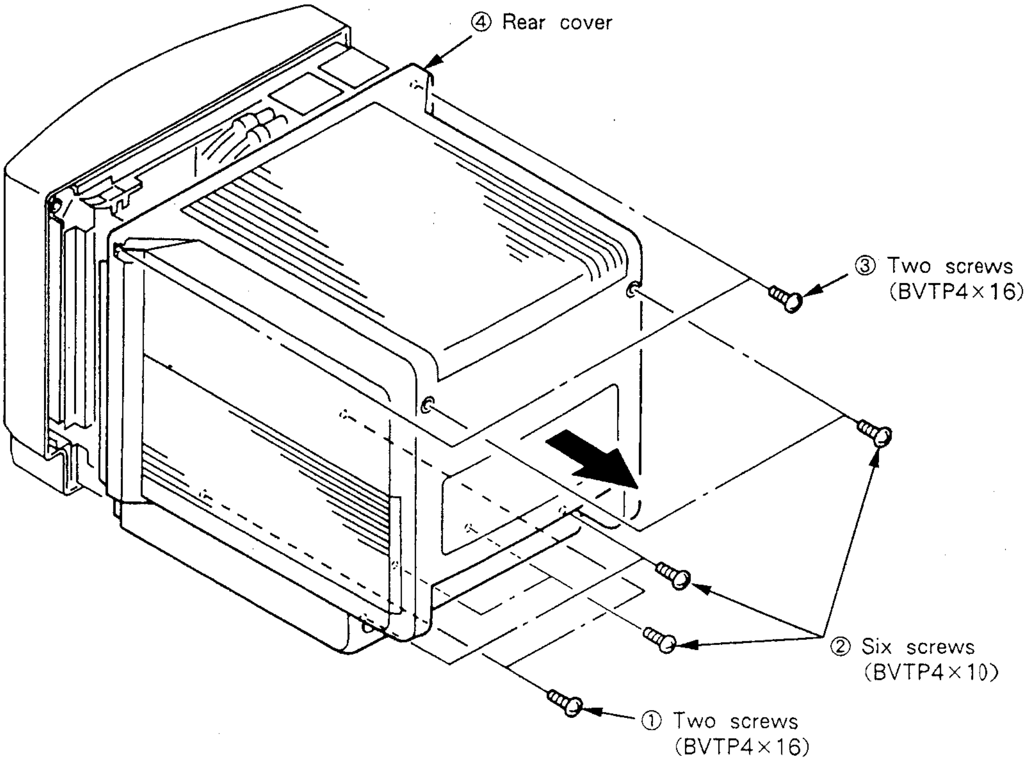
Mutual interference of deflection may occur when several monitors are ranged side by side for a loop-through connection, as this unit is compatible with the signals of high horizontal frequencies. In such a situation, allow adequate space between each unit.

22 Earphone jacks

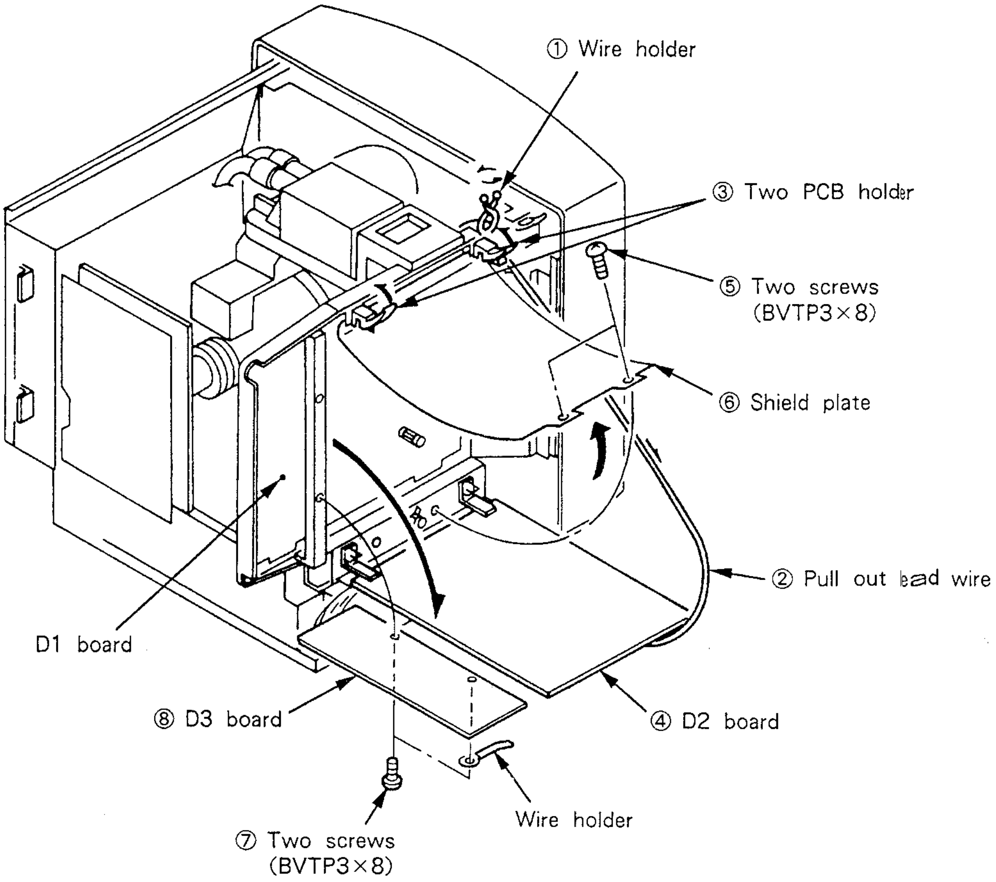
Phone 1: When the earphone is connected, the sound through the speaker is also audible.
Phone 2 (Switched): When the earphone is connected, the sound through the speaker is not audible.
If a stereo headphone plug is inserted to Phone 1 or Phone 2, the monaural sound will be heard from both the left and right channels.

SECTION 2
DISASSEMBLY

2-1. REAR COVER REMOVAL

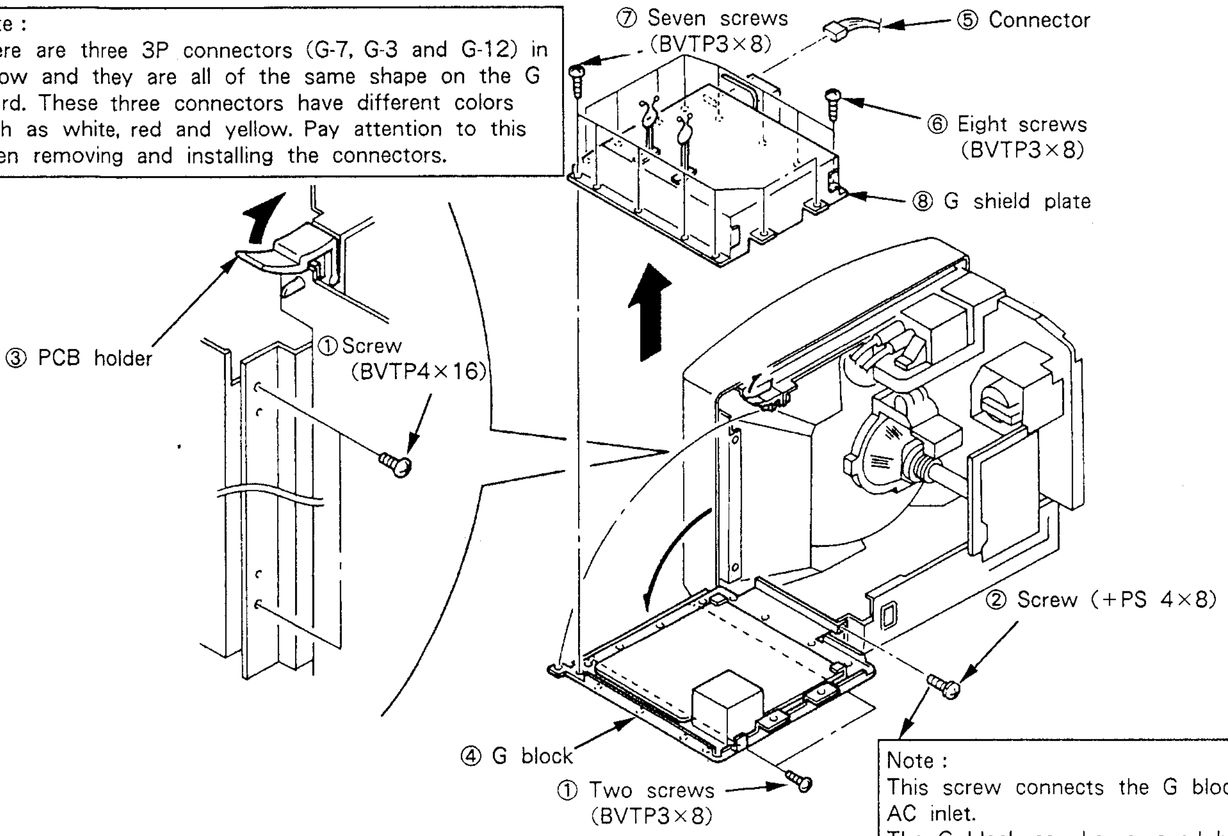

④ Rear cover
③ Two screws (BVTP4×16)
② Six screws (BVTP4×10)
① Two screws (BVTP4×16)

2-2. D1, D2 AND D3 BOARDS REMOVAL


① Wire holder
③ Two PCB holder
⑤ Two screws (BVTP3×8)
⑥ Shield plate
② Pull out lead wire
D1 board
⑧ D3 board
④ D2 board
⑦ Two screws (BVTP3×8)
Wire holder

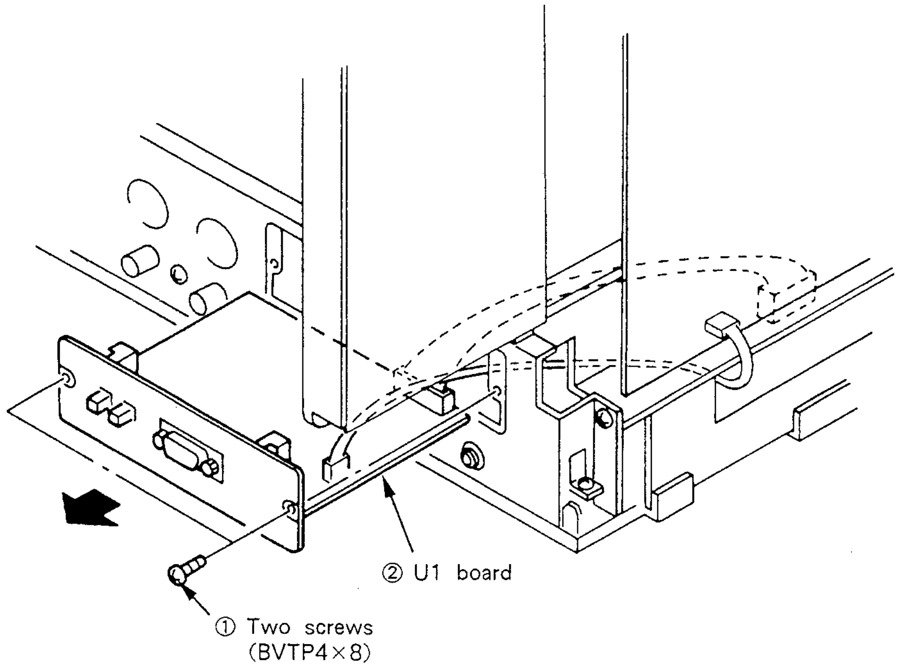
2-3. G BOARD REMOVAL

Note :
There are three 3P connectors (G-7, G-3 and G-12) in a row and they are all of the same shape on the G board. These three connectors have different colors such as white, red and yellow. Pay attention to this when removing and installing the connectors.

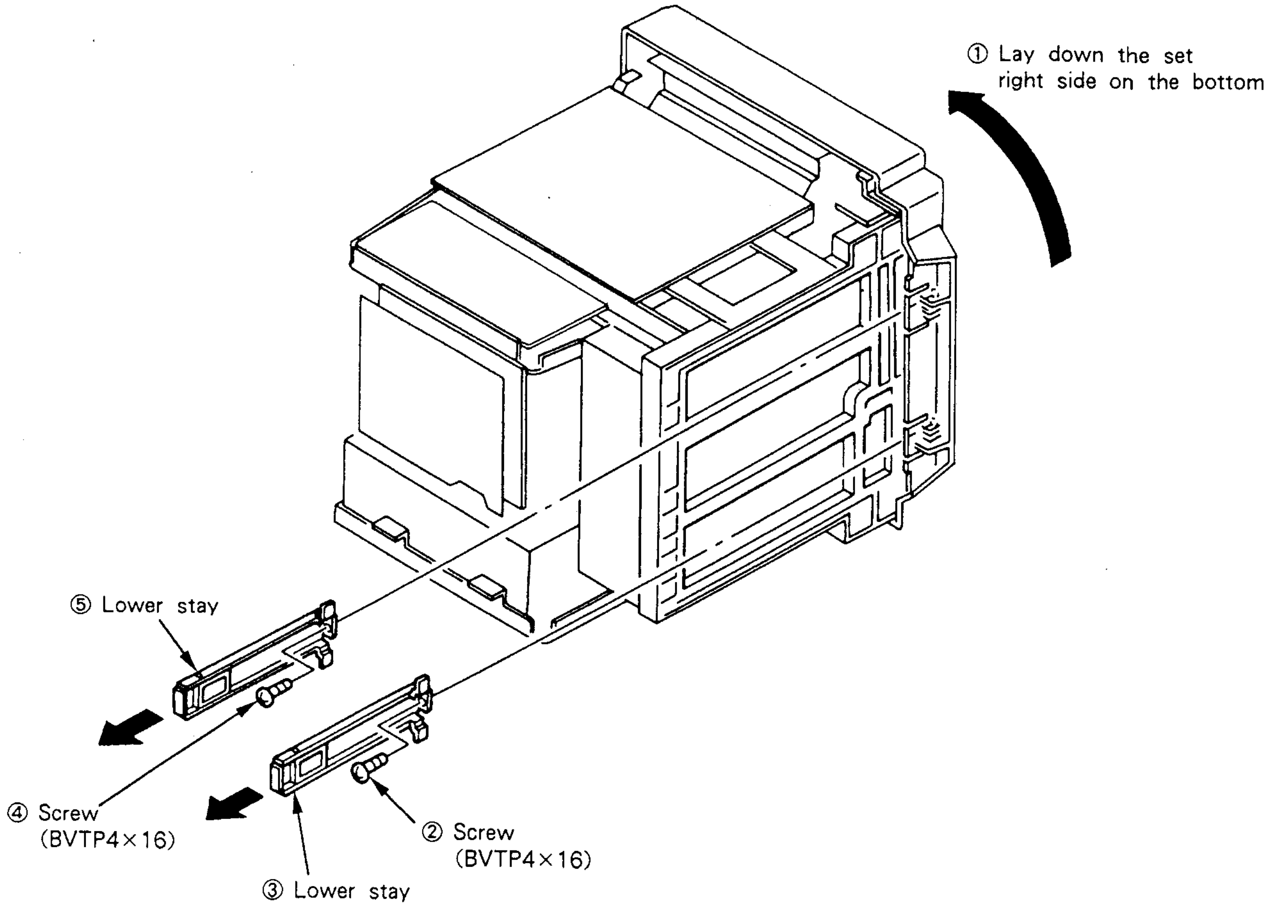

⑦ Seven screws
(BVTP3×8)
⑤ Connector
⑥ Eight screws
(BVTP3×8)
⑧ G shield plate
③ PCB holder
① Screw
(BVTP4×16)
② Screw (+PS 4×8)
④ G block
① Two screws
(BVTP3×8)

Note :
This screw connects the G block and AC inlet.
The G block can be removed by loosening this screw. Firmly re-tighten this screw when re-assembling the G block.

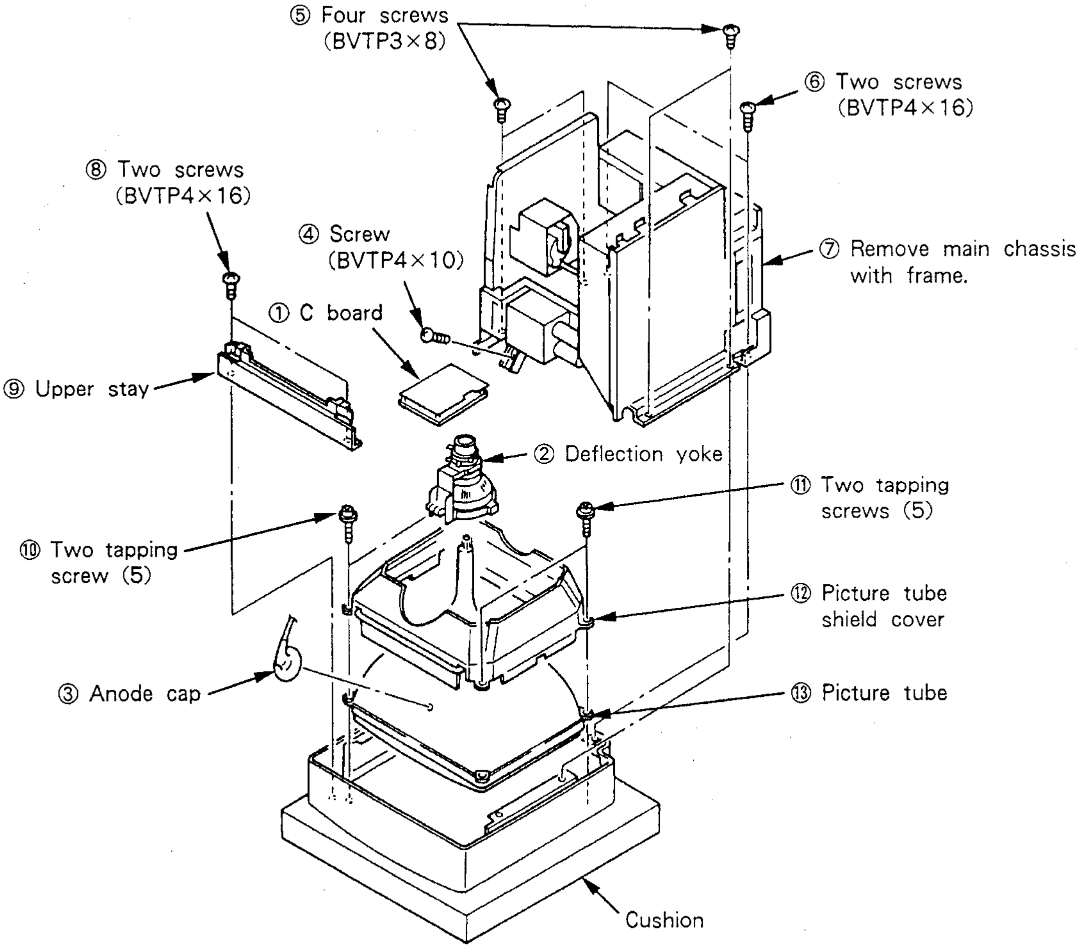
2-4. U1 BOARD REMOVAL


② U1 board
① Two screws
(BVTP4×8)

2-5. LOWER STAYS REMOVAL


① Lay down the set right side on the bottom
⑤ Lower stay
④ Screw (BVTP4×16)
② Screw (BVTP4×16)
③ Lower stay

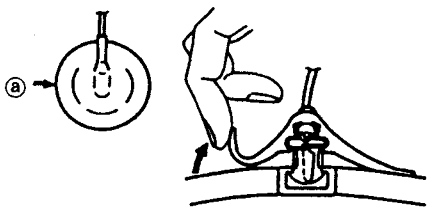
2-6. PICTURE TUBE REMOVAL


⑤ Four screws (BVTP3×8)
⑥ Two screws (BVTP4×16)
⑧ Two screws (BVTP4×16)
④ Screw (BVTP4×10)
⑦ Remove main chassis with frame.
① C board
⑨ Upper stay
② Deflection yoke
⑪ Two tapping screws (5)
⑩ Two tapping screw (5)
⑫ Picture tube shield cover
③ Anode cap
⑬ Picture tube
Cushion

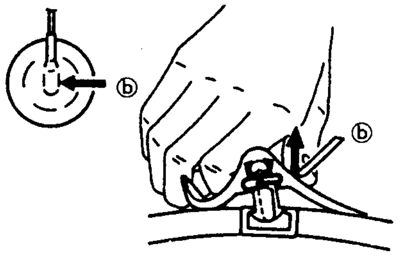
- **REMOVAL OF ANODE-CAP**

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

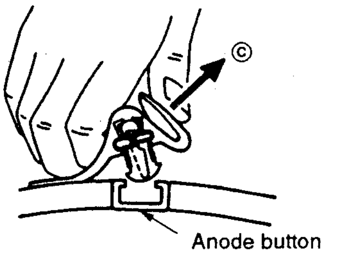
- **REMOVING PROCEDURES**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.


ⓒ
Anode button

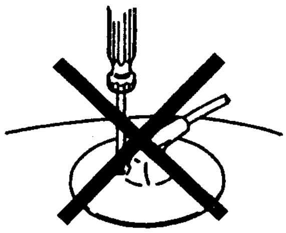
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

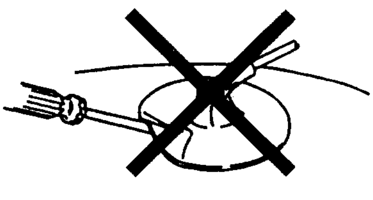
- **HOW TO HANDLE AN ANODE-CAP**

① Don't hurt the surface of anode-caps with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

3-1. LANDING ADJUSTMENT

Preparations:

1. Face the set CRT surface toward the east or west in order to lessen the effect of geomagnetism.
2. Turn the set power switch on and degauss.

Adjustment:

1. Input a white signal.
2. Perform rough adjustment of white balance, screen (G2), horizontal convergence and focus. The purity adjustment knob should be at the center position at this time. (Fig. 1)
3. Set C board R BKG VR (RV705) to maximum and G BKG VR (RV706) and B BKG VR (RV707) to minimum.
4. Move the deflection yoke back and adjust the purity magnet so that the entire picture is as shown in Fig. 2.
5. Adjust so that the entire picture becomes Green while moving the deflection yoke forward.
6. Use the G BKG VR (RV706) and B BKG VR (RV707) to check and adjust each color following steps 3 - 5.
7. When landing at the corners is not correct, perform magent correction (Fig. 3).
8. When the position of the deflection yoke is finalized, secure with the bracket.

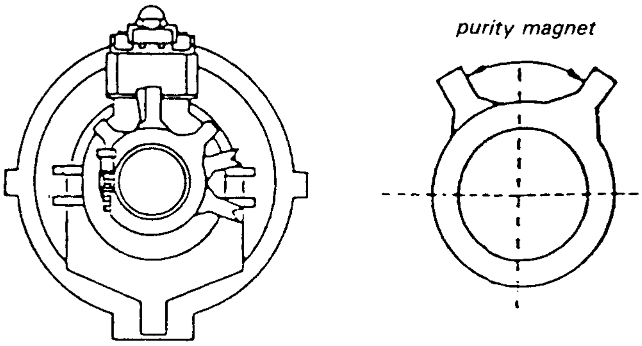

purity magnet

Fig. 1

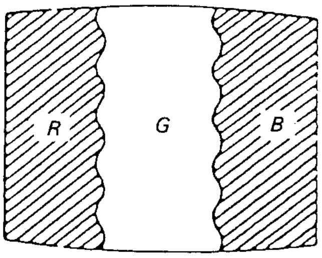


Fig. 2

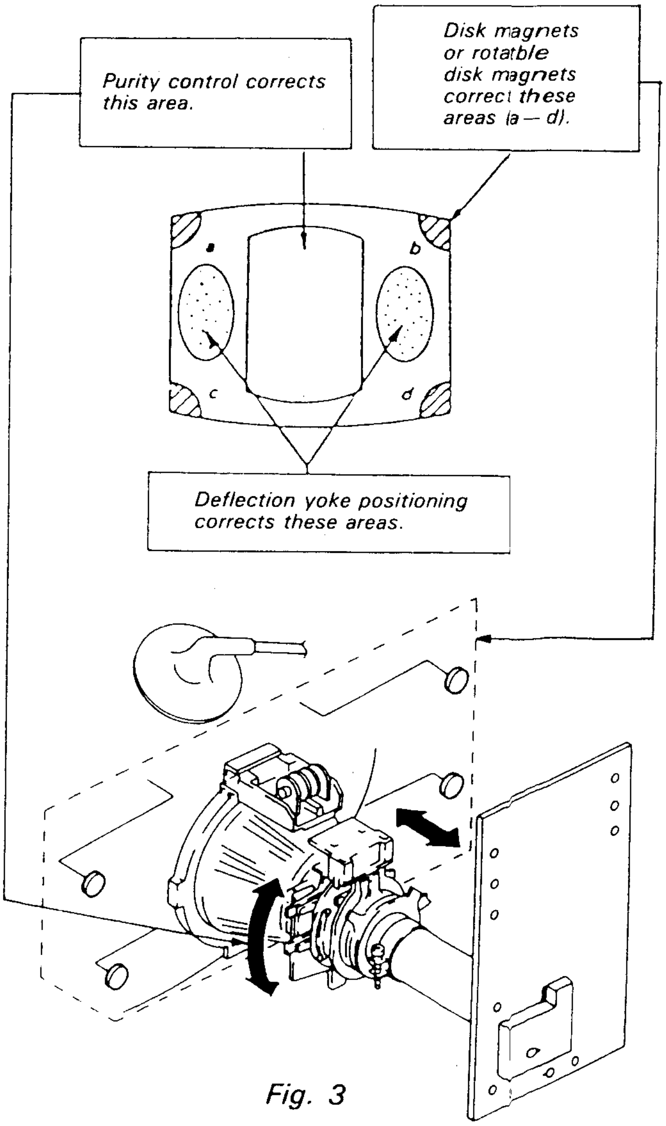
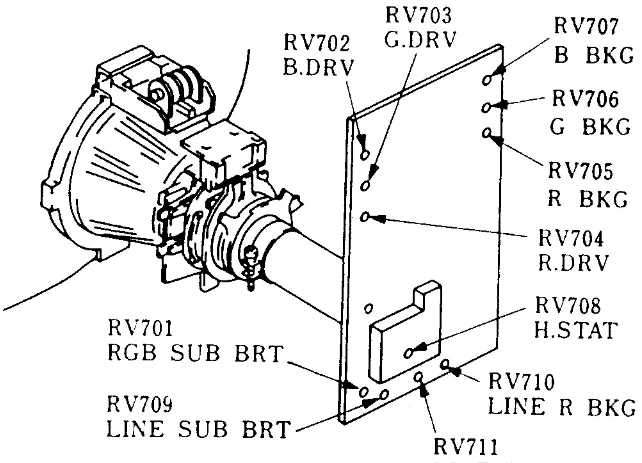
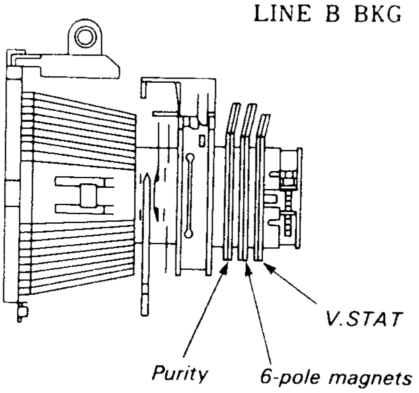

Purity control corrects this area.
Disk magnets or rotatble disk magnets correct these areas (a – d).
a
b
c
d
Deflection yoke positioning corrects these areas.

Fig. 3


RV703
G.DRV
RV702
B.DRV
RV707
B BKG
RV706
G BKG
RV705
R BKG
RV704
R.DRV
RV708
H.STAT
RV701
RGB SUB BRT
RV709
LINE SUB BRT
RV710
LINE R BKG
RV711
LINE B BKG


V.STAT
Purity
6-pole magnets

3-2. DEFLECTION YOKE NECK ADJUSTMENT

Perform this adjustment when there is misconvergence and pincushon distortion at the top and bottom of the picture.

1. Tilt the deflection yoke up and down to adjust when the pincushion distortion is not the same at the top and bottom of the picture. (Fig. 4)

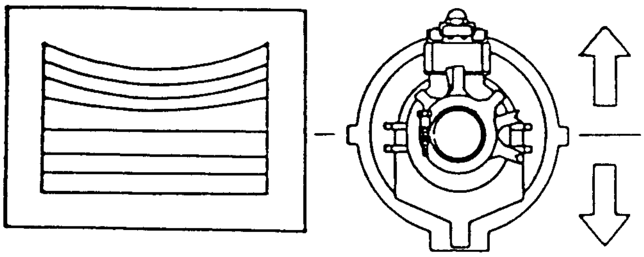


Fig. 4

2. When there is misconvergence at the top and bottom of the picture as shown in Fig. 5, tilt the deflection yoke to the left and right to adjust.

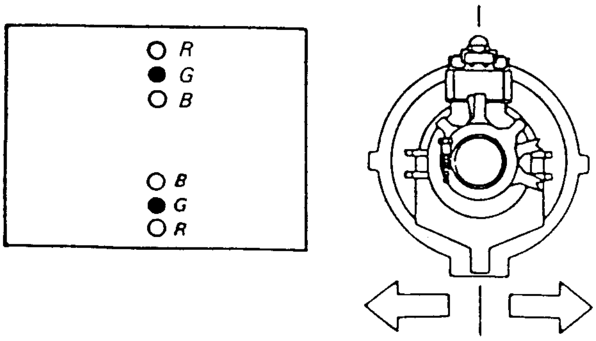
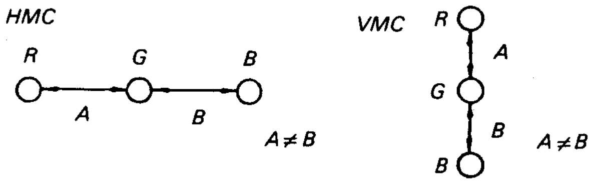


Fig. 5

1) Convergence Adjustment for Picture Center (H. STAT, V. STAT)
1. Input a dot signal, and with BRT at minimum, adjust for optimum picture with PICTURE.
2. Line up picture center nd horizontal direction RGB dots with H. STAT VR (RV708).
3. Line up picture center and vertical direction RGB dots with V. STAT magnet.

2) Picture center horizontal direction asymmetrical misconvergence (HMC)
Picture center vertical direction asymmetrical misconvergence (VMC)

4. For HMC, move the six-pole magnet to adjust so that the R and B dots are symmetrical to the right and left of the G dot.
5. For VMC, move the six-pole magnet to adjust so that the R and B dots are symmetrical above and below the G dot.


HMC
R
G
B
A
B
A≠B
VMC
R
A
G
B
B
A≠B

Dot Movement due to 6-pole Magnet movement

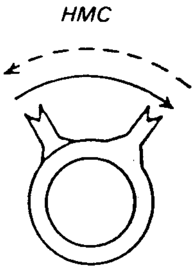


Fig. 6

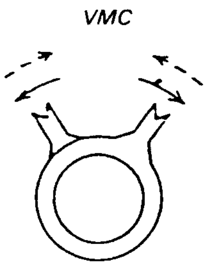
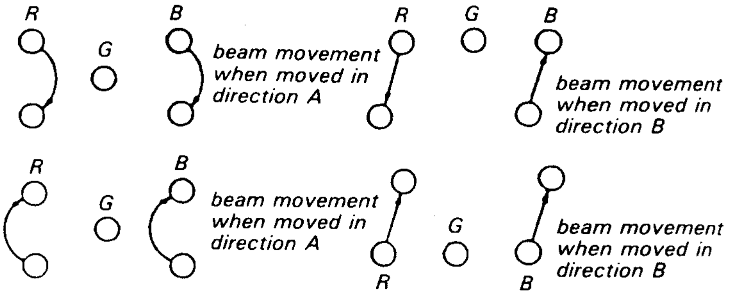
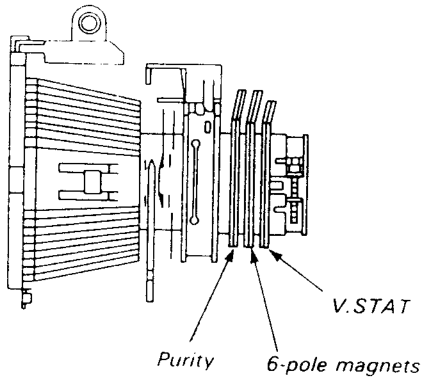


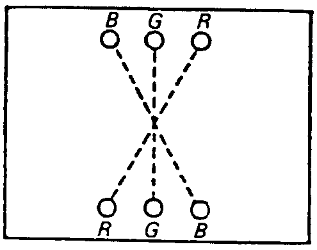
Fig. 7


R
G
B
beam movement when moved in direction A
R
G
B
beam movement when moved in direction B
R
G
B
beam movement when moved in direction A
R
G
beam movement when moved in direction B
B


V.STAT
Purity
6-pole magnets

3) Picture Periphery Convergence Adjustment

1. For Y crosstalk, adjust with the Y crosstalk correction magnet.



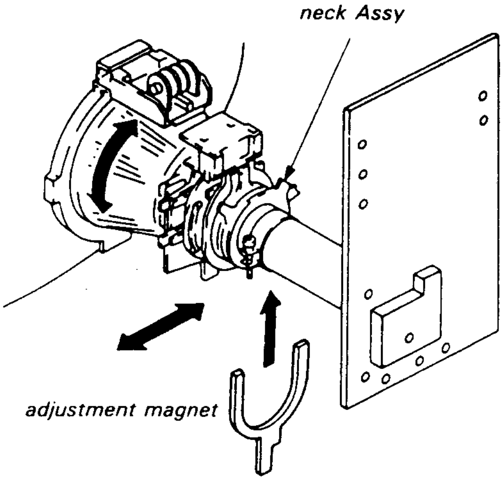
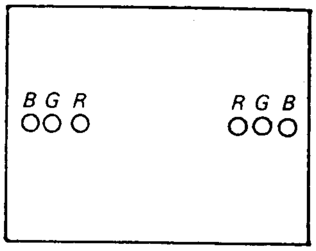

neck Assy
adjustment magnet

Fig. 8

2. Adjust with the X crosstalk adjustment magnet when there is H TILT.



When red dots are off to the inside at the right and left.

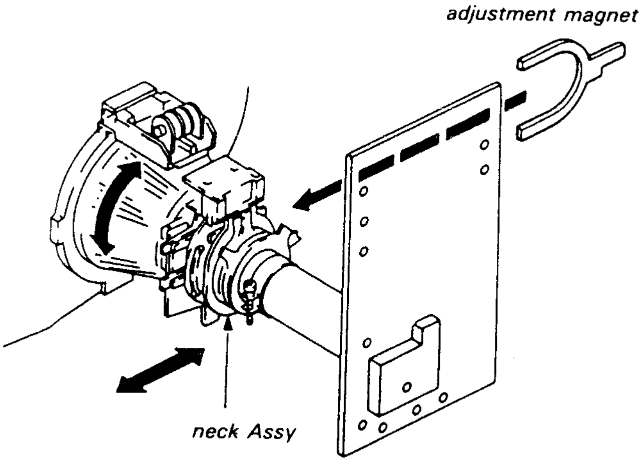
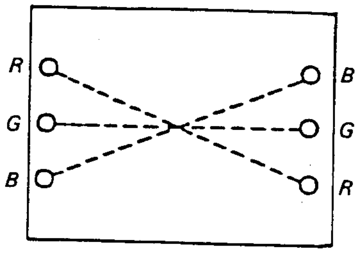
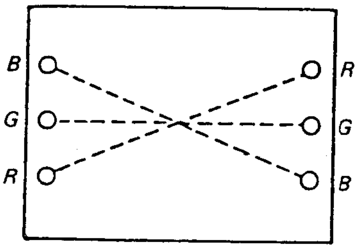

adjustment magnet
neck Assy

Fig. 9

3. Adjust with the deflection yoke reactor correction coil when there is X crosstalk. (Fig. 10)

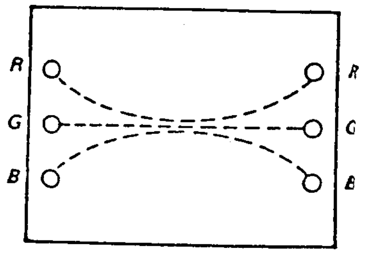


In this case adjust with coil A in Fig. 11.



In this case adjust with coil B in Fig. 11.

4. Adjust with the deflection yoke reactor correction coil when there is X bow.



In this case adjust with coil C in Fig. 11. At this time put D core in so that the marked side is on side A. (Fig. 11)
Note: Paint D core after adjustment.

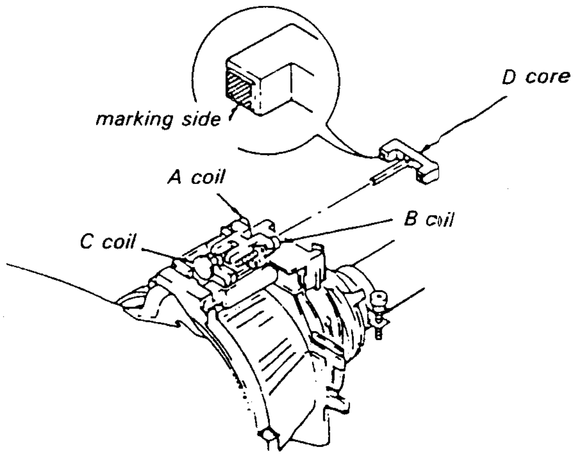

D core
marking side
A coil
B coil
C coil

Fig. 11

3-3. SCREEN ADJUSTMENT

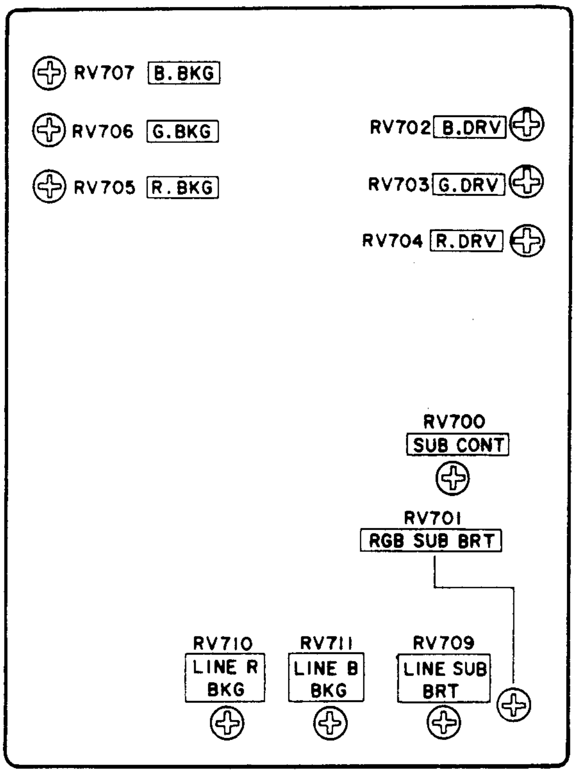
(1) Input no signal at RGB mode.
(2) Set the C board VRs as shown below.
RV705 ~ 707 R. G. B. BKG: MIN.
RV710, 711 LINE R. B BKG: MIN.
RV702 ~ 704 R. G. B DRV: MAX.
RV701 RGB SUB BRT: MAX.
RV709 LINE SUB BRT: CENT.
RV700 SUB CONT: CENT.
(3) Lower the raster gradually by turning RV502 (SCREEN), and check which color remains at last.
(4) Apply 145 V from the DC power supply to the cathode corresponding to the color remaining in step 3.
(5) Adjust RV502 (SCREEN) to the point immediately before the raster is cut off.

3-4. WHITE BALANCE ADJUSTMENT (1)

(1) Input an all white signal at RGB mode, and adjust screen size with user control volume so that the all of effective screen is bright.
(2) Demagnetize the CRT with a degausser.
(3) Set trimmers as follows:
(i) RV705 (R. BKG), RV706 (G. BKG), RV707 (B. BKG) — Min.
(ii) RV704 (R. DRV), RV703 (G. DRV), RV702 (B. DRV) — Max.
(iii) RV701 (RGB SUB.BRT) ...... CENT.
(iv) RV709 (LINE SUB.BRT)...... CENT.
(v) BRT VR .... CENT
(vi) PIC .... Max.
(vii) RGB PIC .... Max.
(4) Attach the analyzer sensor to the center of the CRT.
(5) Set video signal level to 10 IRE.
0.10 ± 0.002 Vp-p (terminated at 75 ± 1%).
(6) Adjust cutoff W/B with the BKG VRs (RV705, 706, 707).
Cutoff: 3 Nit (3 ~ 4)
(7) Set video signal level to 100 IRE.
0.70 ± 0.002 Vp-p (terminated at 75 ± 1%).
(8) Adjust highlight White Balance with the DRV VRs (RV702, 703, 704).
* If a color is too bright, lower its setting.
(9) Tracking
Repeat steps 5 to 8 so that cutoff and highlight White Balance fall within the specification.
Specification: 9300°K + 8 MPCD, within 2 JND
(10) Set video signal level to 10 IRE.
0.07 ± 0.002 Vp-p (terminated at 75 ± 1%)
Adjust RGB SUB BRT with RV701 so that a slight brightness is obtained.
(11) Set video signal level to 0 IRE and confirm that a total cutoff is obtained.

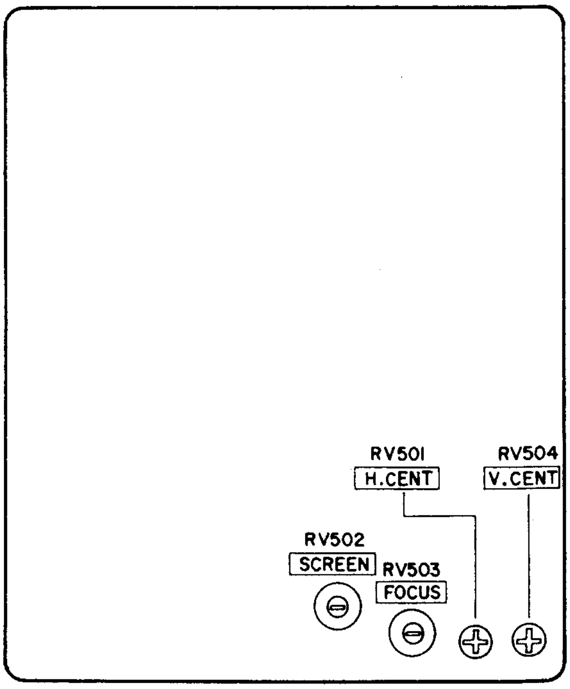
Note :
Do not use a metal screwdriver when adjusting the C board. Use a core screwdriver which is not made metal, as malfunction will be caused if a metal screwdriver contacts the shield plate.

C BOARD



(COMPONENT SIDE)

DI BOARD



(COMPONENT SIDE)

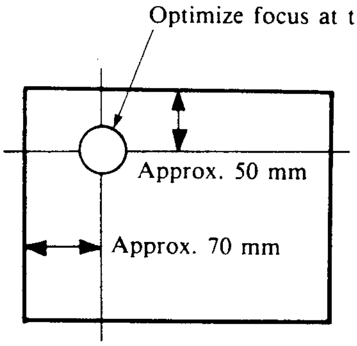
3-5. WHITE BALANCE ADJUSTMENT (2)

(1) Input a white signal to LINE A.
(2) Change the white signal level and set CRT luminance to 8 NIT.
(3) Adjust white balance with RV711 B CUT-OFF and RV710 R CUTOFF.
(4) Set white signal level to 100 IRE.
(5) Adjust white balance with RV204 B DRIVE and RV203 R DRIVE on the A board.
(6) Repeat (2) to (5).
(7) Set white signal level to 10 IRE and adjust RV709 SUB BRT 2 so that a signal brightness is obtained.

Also confirm that a total cutoff is obtained at 0 IRE.

3-6. FOCUS ADJUSTMENT

1) In the RGB A mode, display characters on the whole screen at fh 31.47 kHz, 60 Hz.
2) Adjust RV503 (FOCUS) so that focus is optimum at the point shown below, with the following settings: BRT center, PIC max., RGB PIC max.

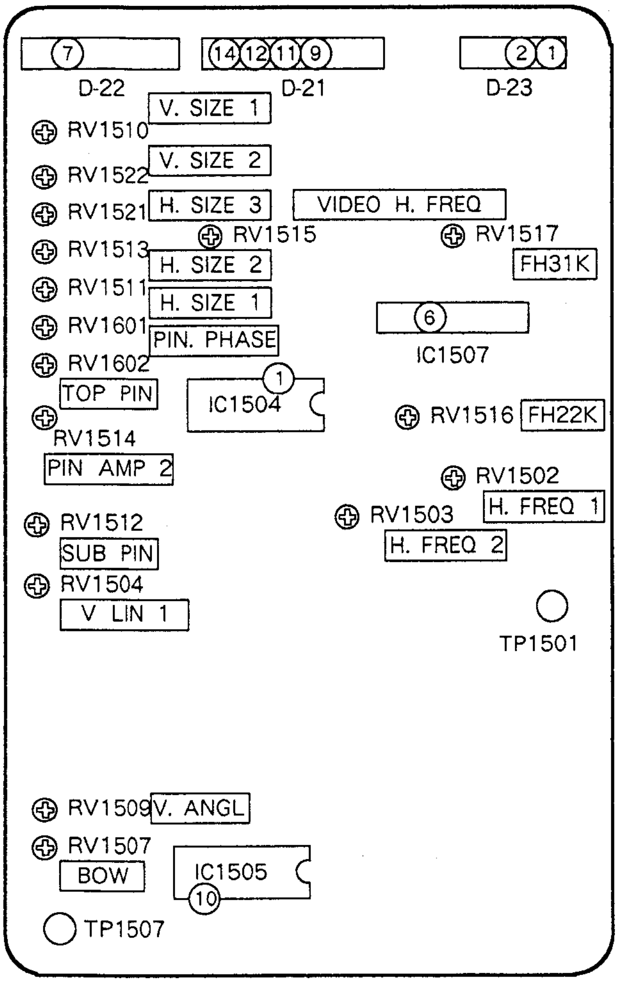


3) Change to a white signal.
4) Confirm that there are no magenta rings.

SECTION 4
CIRCUIT ADJUSTMENTS

4-1. D1, D2 BOARDS ADJUSTMENT

D2 BOARD


⑦
⑭⑫⑪⑨
②①
D-22
D-21
D-23
RV1510
V. SIZE 1
RV1522
V. SIZE 2
RV1521
H. SIZE 3
VIDEO H. FREQ
RV1515
RV1517
RV1513
H. SIZE 2
FH31K
RV1511
H. SIZE 1
⑥
RV1601
PIN. PHASE
IC1507
RV1602
①
TOP PIN
IC1504
RV1516
FH22K
RV1514
PIN AMP 2
RV1502
RV1503
H. FREQ 1
RV1512
H. FREQ 2
SUB PIN
RV1504
V LIN 1
TP1501
RV1509
V. ANGL
RV1507
BOW
IC1505
⑩
TP1507

(COMPONENT SIDE)

Vc Voltage Adjustment

* High level at Pin ⑨ of the D-21 connector (RGB Mode)

1) Input signal f_H : 15.735kHz
   fv : 60Hz
   Measurement point : TP1501 (Vc)
   Specification : 3.50±0.05Vdc
   If the specification is not satisfied, adjust △R1678 (1/4W, 1.0kΩ to 47kΩ).
2) Switch input signals to f_H : 31.47kHz
   fv : 60Hz
   and confirm that voltage at TP1501 is 7.0±0.1Vdc

※ Low level at Pin ⑨ of the D-21 connector (VIDEO Mode).

1) Select △R1729 (1/4W, 24 to 270kΩ) so that voltage at TP1501 is 3.50±0.05Vdc, and solder it.

Horizontal Oscillation Frequency Adjustment

*Always perform Vc voltage adjustment first.

*High level at Pin ⑨ of the D-21 connector (RGB Mode).

Input signals 1. f_H : 15.734kHz fv : 60Hz
2. f_H : 21.86kHz fv : 60Hz
3. f_H : 33.00kHz fv : 60Hz

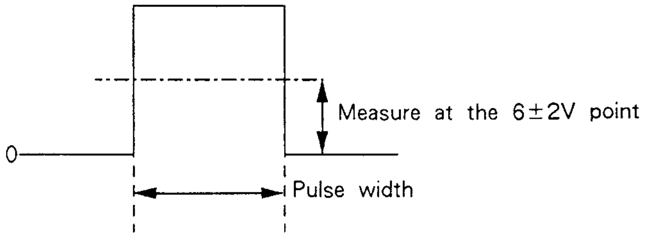
1) Connect 10μF/16V chemical capacitor between Pin ① of IC1504 and ground.
2) Connect a frequency counter to Pin ⑩ of IC1505 (TP1507).
3) Confirm that RV1503 is set to the mechanical center, input signal NO. 3 above and adjust RV1502 so that the counter reads 33.00±0.1kHz.
4) Change the input to signal NO. 1 and adjust RV1503 so that the counter reads 15.734±0.05kHz.
5) Change the input back to signal NO. 3 and adjust RV1502 so that the counter reads 33.00±0.1kHz.
6) Change the input to signal NO. 2 and confirm that the counter reads 21.86±0.3kHz.
7) Repeat steps 4 to 6 above and adjust tracking so that readings are within specifications for all three signals.
   specifications :
   1. 15.734±0.05kHz
   2. 21.86±0.3kHz
   3. 33.00±0.1kHz.

※ Low level at Pin ⑨ of the D-21 connector (VIDEO Mode).

1) Change the input from RGB mode to VIDEO mode (turn level at Pin ⑨ of the D-21 connector to low) and receive a monoscope or color-bar signal.
   Note : use 525/60 signal.
2) Adjust RV1515 so that the counter reads 15.734±0.1kHz.

Horizontal Drive Pulse Adjustment

1) Input a signal of f_H 15.734kHz, fv 60Hz, monitor Pin ⑩ (TP1507) of IC1505 with an oscilloscope and adjust △R1670 (1/4W, RN, 1.0 to 100kΩ) so that pulse width becomes 24.0±1.5μs.
2) Change the input signal to f_H 31.47kHz, fv 60Hz, and confirm that pulse width is 12.0±1.0μs.

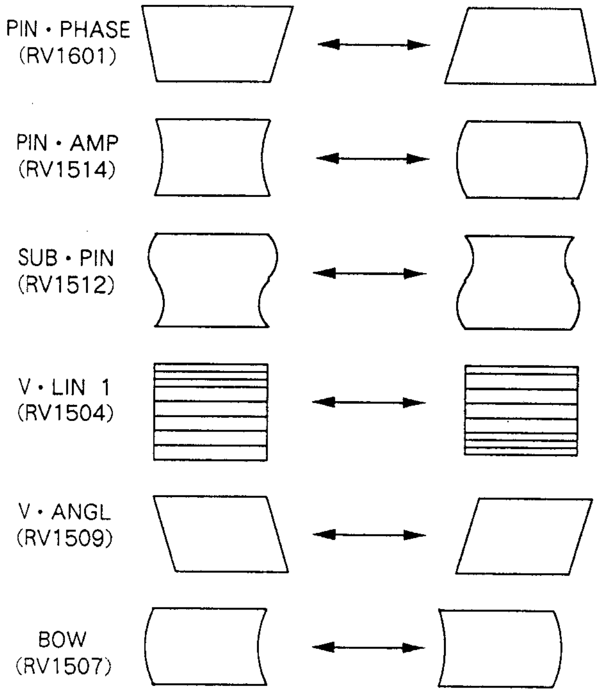

0
Measure at the 6±2V point
Pulse width

f_H 15.734kHz··········24.0±1.5μs
31.47kHz···············12.0±1.0μs

Deflection Adjustment

1) In the VIDEO mode, input a monoscope signal, turn the controls listed below, and confirm that they work properly.

RV1510	V • SIZE 1
RV1511	H • SIZE 1



Horizontal size specification : 15.0±0.3 frame
Vertical size specification : 11.2±0.3 frame

2) Set to the RGB mode and input a cross hatch signal of f_H 31.47kHz and fv 60Hz.

Adjust the controls below.

RV1513	H • SIZE 2
RV1514	PIN • AMP 2
RV1602	TOP • PIN

3) Set to the SIZE FIX mode, and adjust the controls below.

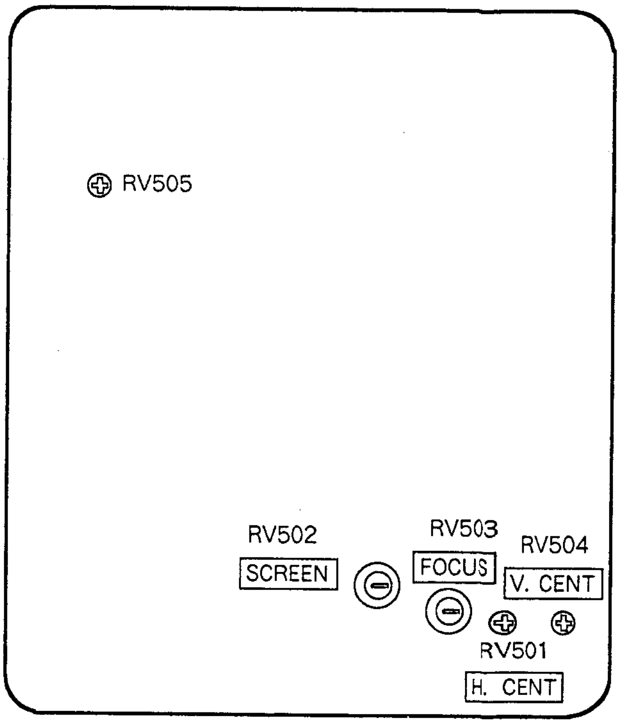
RV1522	V • SIZE 2
RV1521	H • SIZE 3

SIZE FIX mode : D-21 connector ⑪ ⑫ open
⑭ High

4) Turn the controls below and confirm that they work properly. Then return them to their mechanical centers.

RV501	H • CENT
RV504	V • CENT
RV502	SCREEN
RV503	FOCUS

D1 BOARD



(COMPONENT SIDE)

Vertical Sync Frequency Discrimination Circuit Adjustment

* High level at Pin ⑨ of the D-21 connector

1) In the RGB mode, input a signal of f_H 15.7kHz and fv 64kHz.
2) Adjust RV1505 to the exact point where vertical size is enlarged.

Horizontal Sync Frequency Discrimination Circuit Adjustment

※ Perform after VC Voltage Adjustment.

1) Input a color-bar signal of f_H 33.00kHz and fv 60Hz.
2) Adjust RV1516 so that the voltage of Pin ④ of IC1507 becomes 5.20±0.05V.
3) Adjust RV1517 so that the voltage of Pin ⑥ of IC1507 becomes 7.55±0.05V.
4) Confirm that at RGB mode, the voltage of connector D-23 ② is more than 12V when the signal of f_H 21.86kHz is inputted and that is less than 2.0V when the signal of f_H 24.83kHz is inputted.
5) Confirm that at RGB mode, the voltage of connector D-23 ① is more than 12V when the signal of f_H 33.00kHz is inputted and that is less than 2.0V when the signal of f_H 35.00kHz is inputted.

+B (Vcc) Adjustment

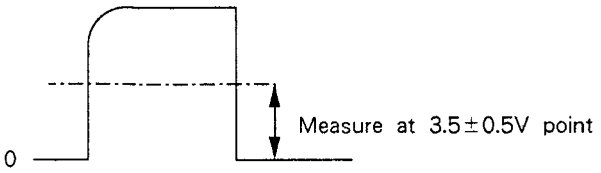
* High level at Pin ⑨ of the D-21 connector (RGB Mode)

1) Input a color-bar signal of f_H 21.8kHz and fv 60Hz.
2) Adjust RV1501 so that voltage at TP1502 (Vcc) becomes $77.0^{+0.5}_{-1.0}$Vdc.

Horizontal Blanking Pulse Adjustment

Note : Perform often Vcc Adjustment.

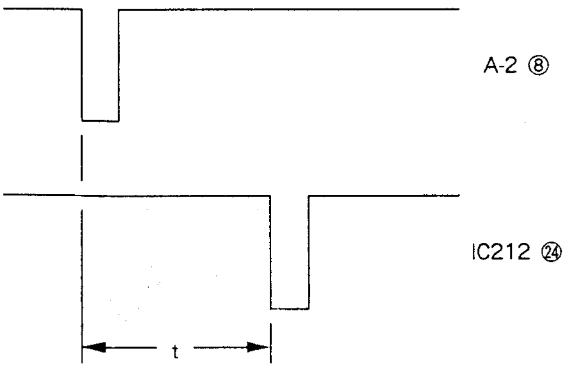
1) Input a color-bar signal of f_H 31.47kHz and fv 60Hz at RGB mode.
2) Monitor the connector D-22 ⑦ (C. BLK) with an oscilloscope.
3) Adjust RV505 so that the pulse width becomes 4.8±0.1 μs.


Measure at 3.5±0.5V point
0

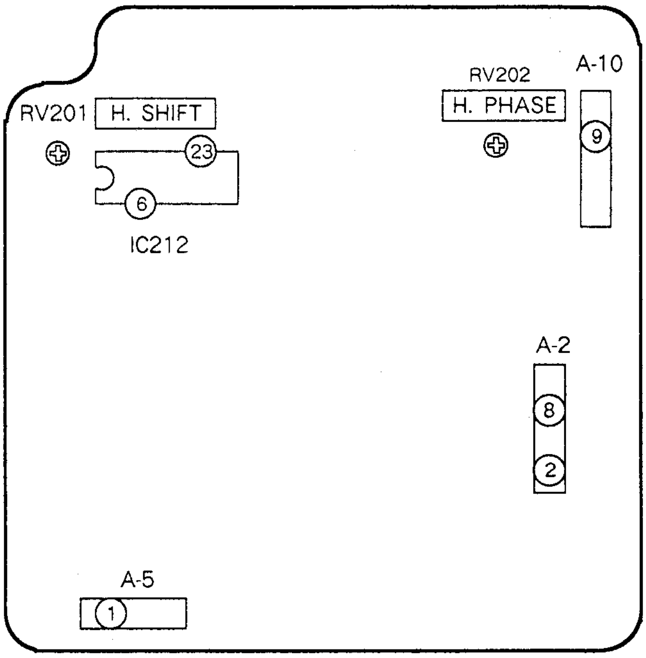
4-2. A BOARD ADJUSTMENT

Input a signal to RGB A.

(1) Press RGB A.
(2) Confirm that a voltage of 12V±0.5V is output to Pin ② of A-2.
(3) Set f_H to 33.00kHz±0.05kHz (negative polarity sync.)
(4) Monitor Pin ⑧ of A-2 and Pin ㉔ of IC212, and adjust RV201 H. SHIFT on the A board to t=24.5 μs±0.1 μs in the figure below.


A-2 ⑧
IC212 ㉔
t

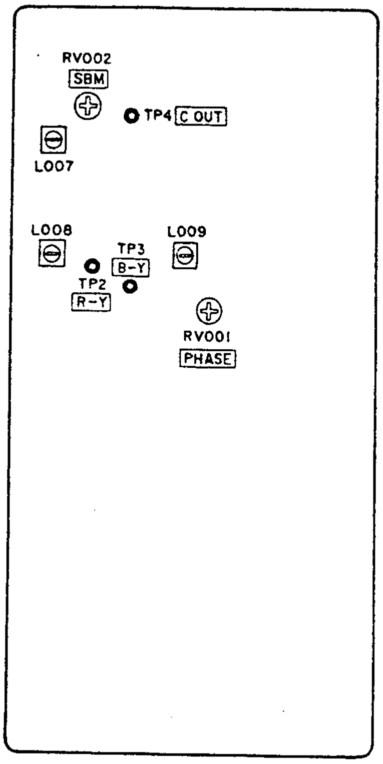
A BOARD


RV201
H. SHIFT
㉓
⑥
IC212
RV202
H. PHASE
A-10
⑨
A-2
⑧
②
A-5
①

(COMPONENT SIDE)

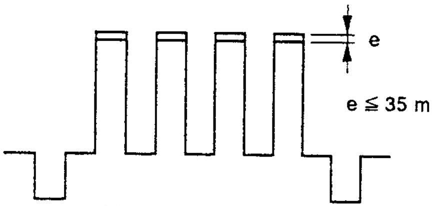
4-3. B BOARD ADJUSTMENTS

B BOARD



PAL adjustments

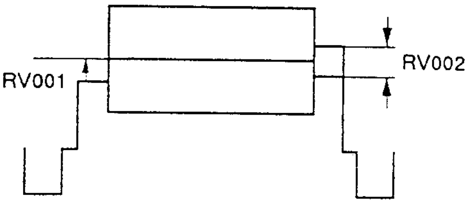
1. PAL line crawling adjustment
   Adjust the line crawling with T001.



Line crawling

2. IHDL and ANTI PAL adjustment
   - Input the special PAL color pattern.
   - Adjust the delay with RV002 SBM.
     (Close the open section at the right side of the wave.)
   - Adjust RV001 PHASE.
     (Align the gray level on the left side of the wave.)

Adjust 1 and 2 while making sure the tracking is correct.

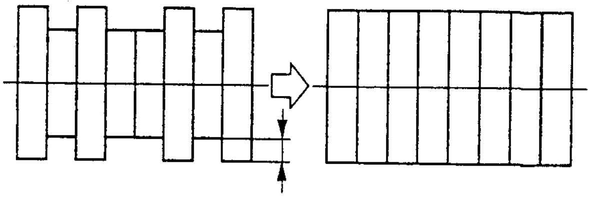


SP CB

SECAM adjustments

Input SECAM color bars.

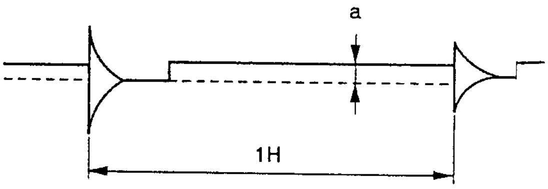
1. Bell filter adjusment
   - Monitor TP-4 C OUT
   - Adjust L007 so that the waveform is flat.



Turn L007 to eliminate overly high and low peaks. (They must all be within 10% of each other.)

C OUT waveform

2. Color balance adjustment
   - Input a SECAM carrier including an all white signal.
   1) R-Y
      - Monitor TP-2 R-Y.
      - Adjust L008 so that a is no greater than 10mV. (See the figure below.)
   2) B-Y
      - Monitor TP-3 B-Y.
      - Adjust L009 so that a is no greater than 10mV. (See the figure below.)



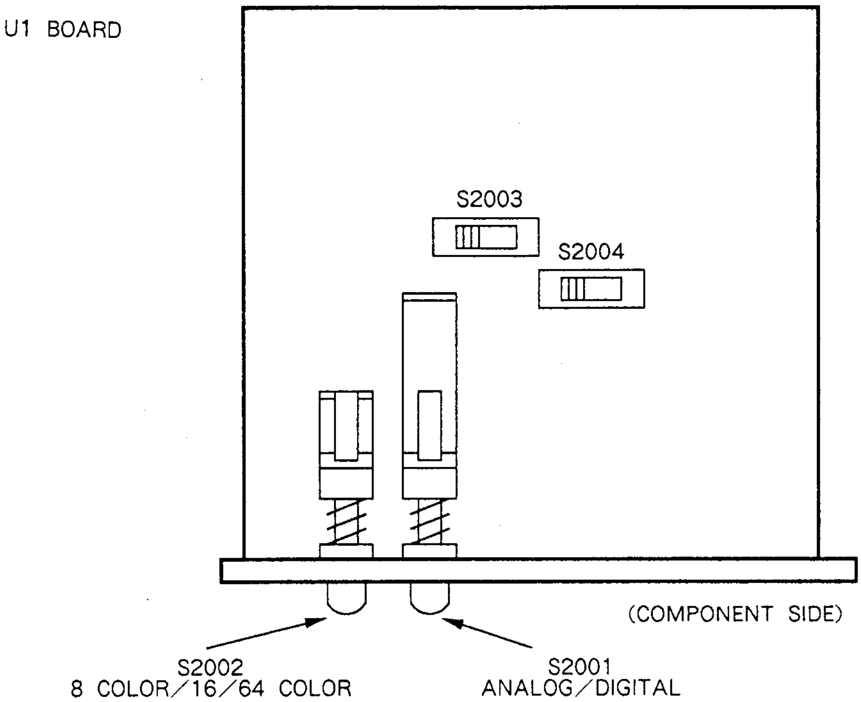
SECAM Color Difference Demodulation Output

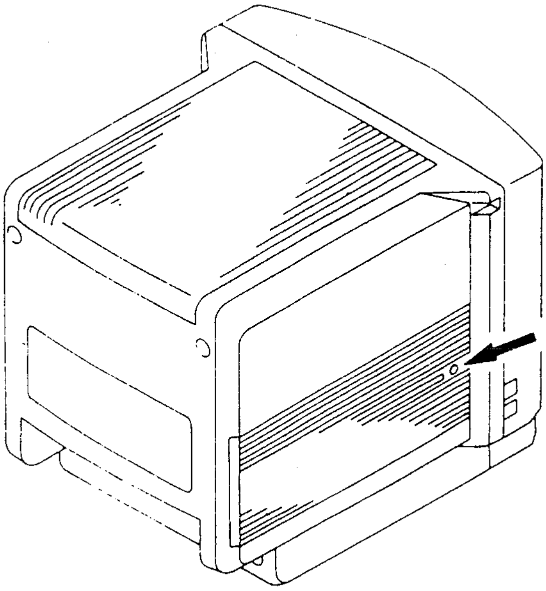
Service Switches on the U1 Board

Normally, when a digital signal is input, differentiation between MDA (monochrome), CGA (16 colors) and EGA (64 colors) can be performed automatically according to sync polarity by setting S1 to 16/64 COLOR. When automatic differentiation is not possible due to signal condition, S2004 is used. S2004 is normally set to the "8" position at the factory.

Change it to 16, 64 or MONO. Then switch S1 to the 8 COLOR position (S1 can be switched between 8 COLOR and 16/64 COLOR, but the display mode when set to 8 COLOR can actually be selected with S2004).

S2003, on the other hand, is used to switch display color in the monochrome mode between green and amber. It is normally set to the green position at the factory.




About the Hole on the left side of the Unit

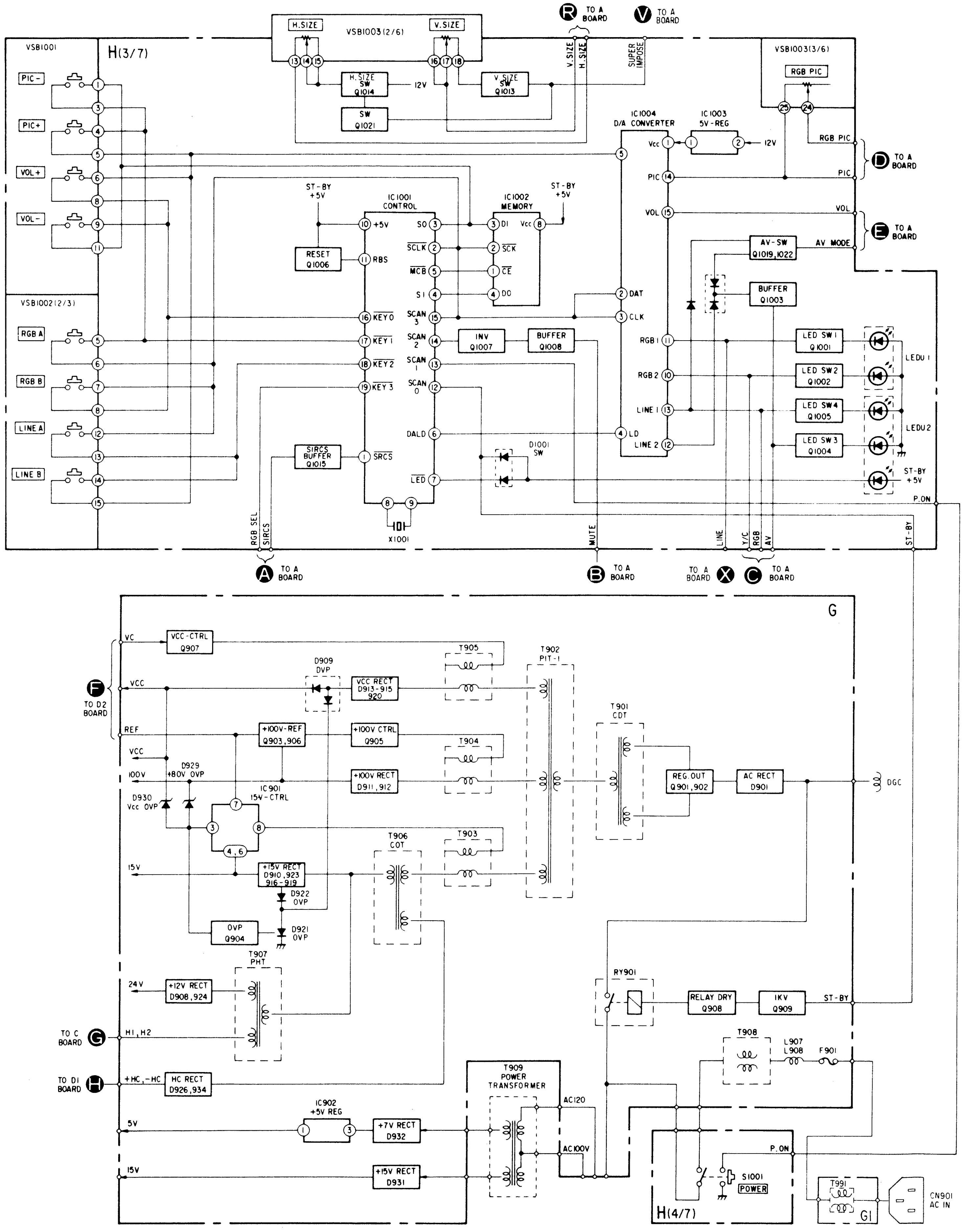
Depending on the input signal, pincushion distortion may occur (this is likely when connecting a NEC PC-9801 or Apple MAC II computer, etc.). In that case, insert a 2-mm screwdriver into the hole on the left side of the unit and turn it to correct distortion.

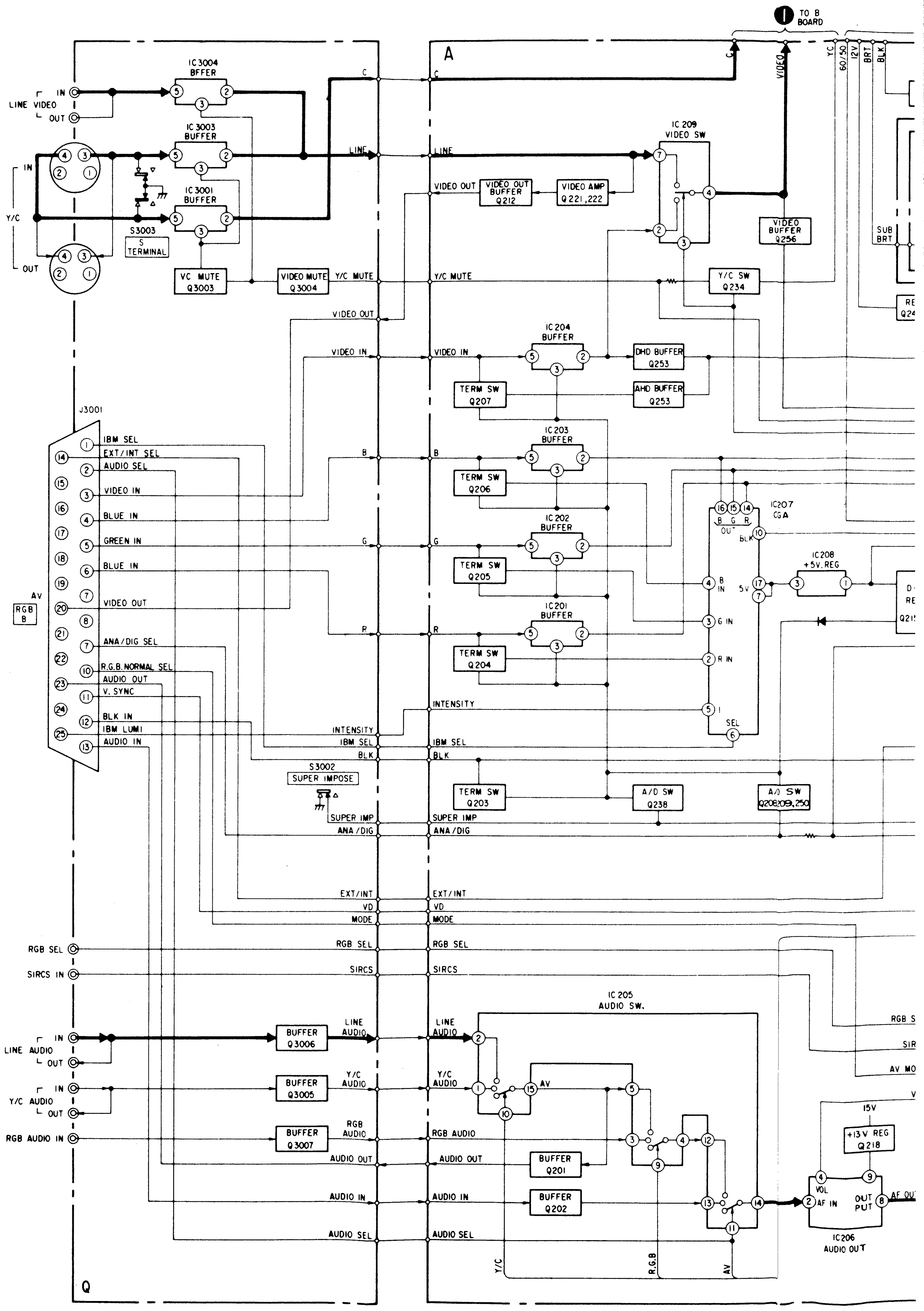
MEMO

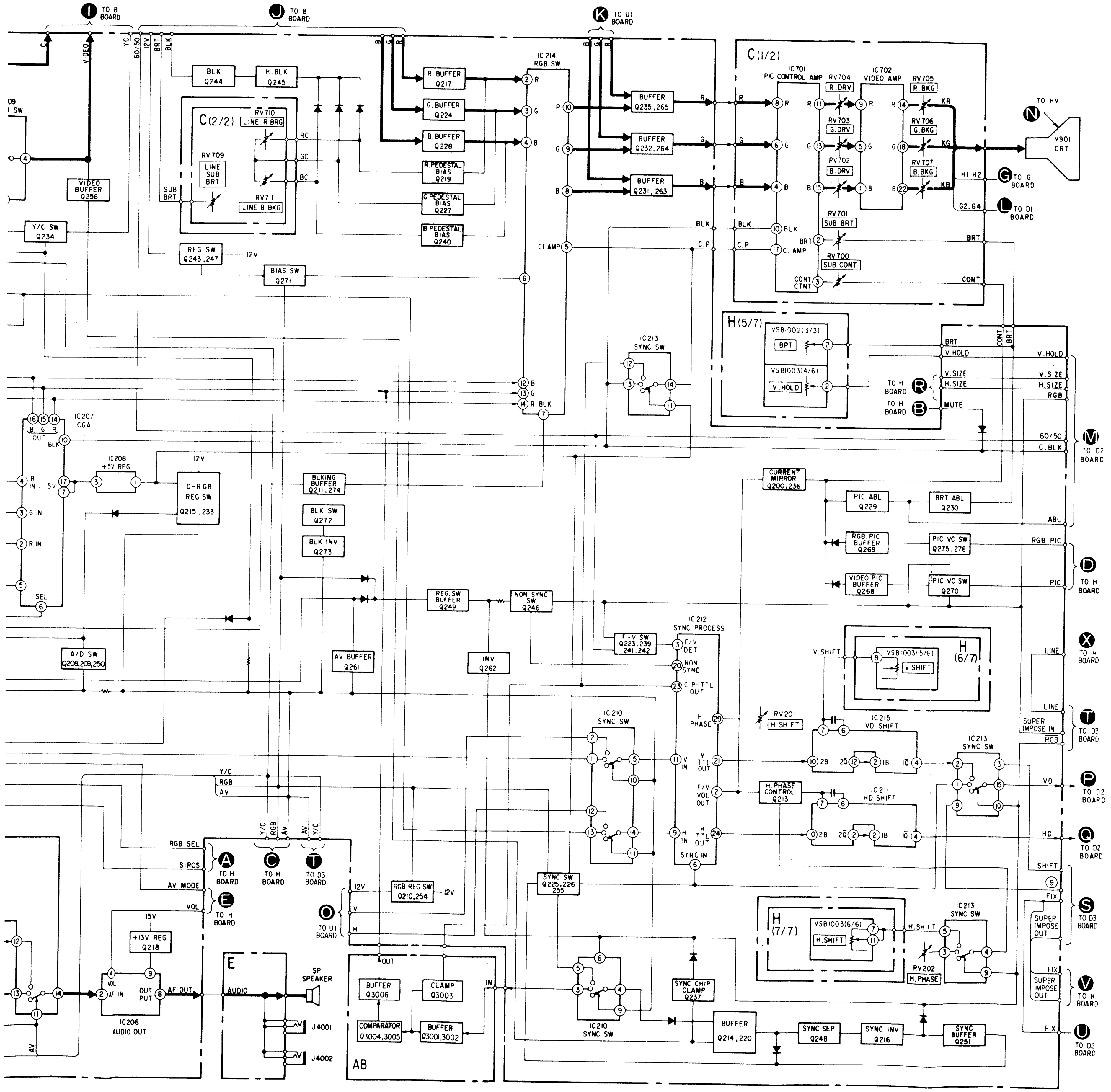
MEMO

SECTION 5
DIAGRAMS

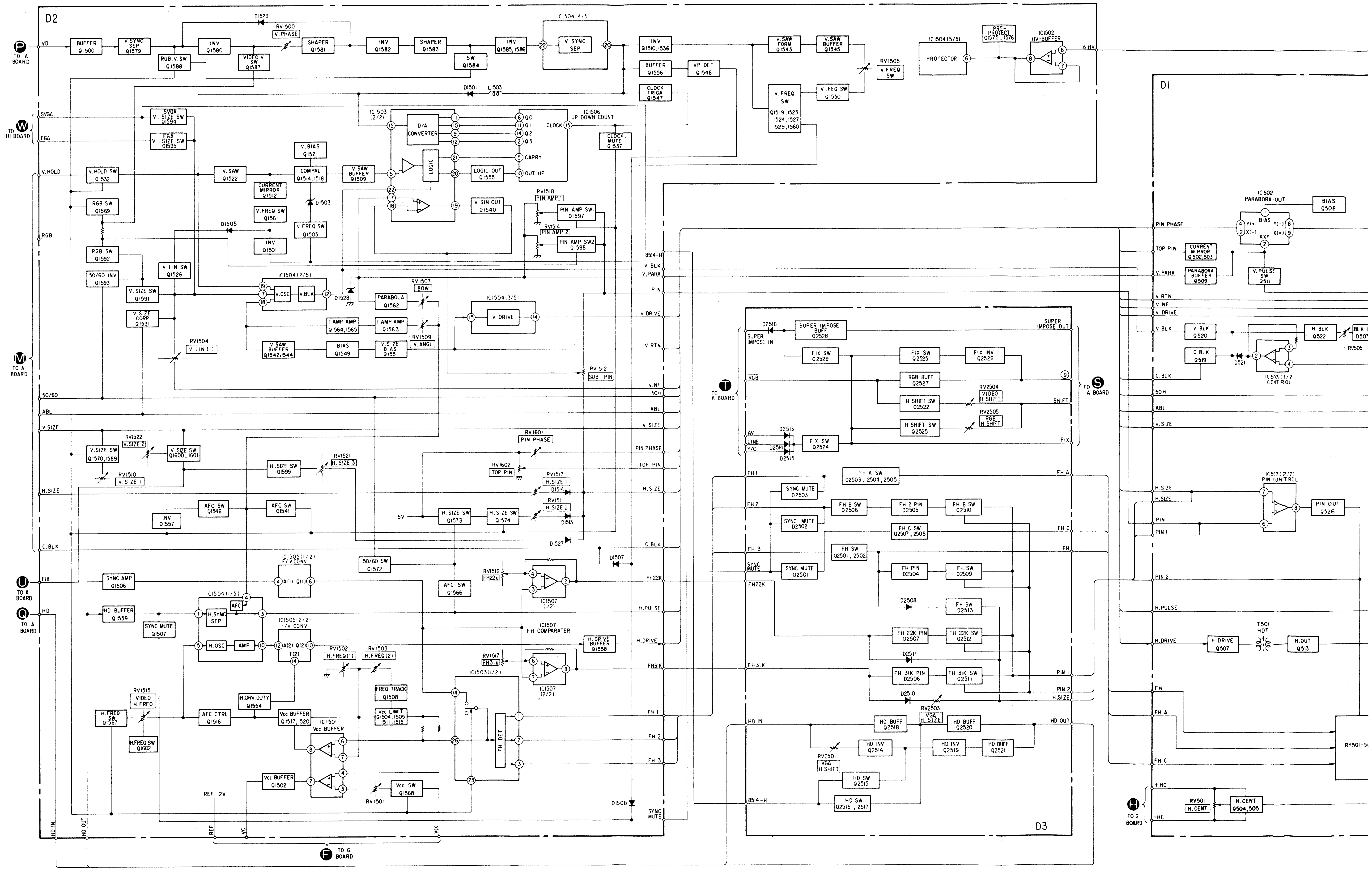
5-1. BLOCK DIAGRAM (1)

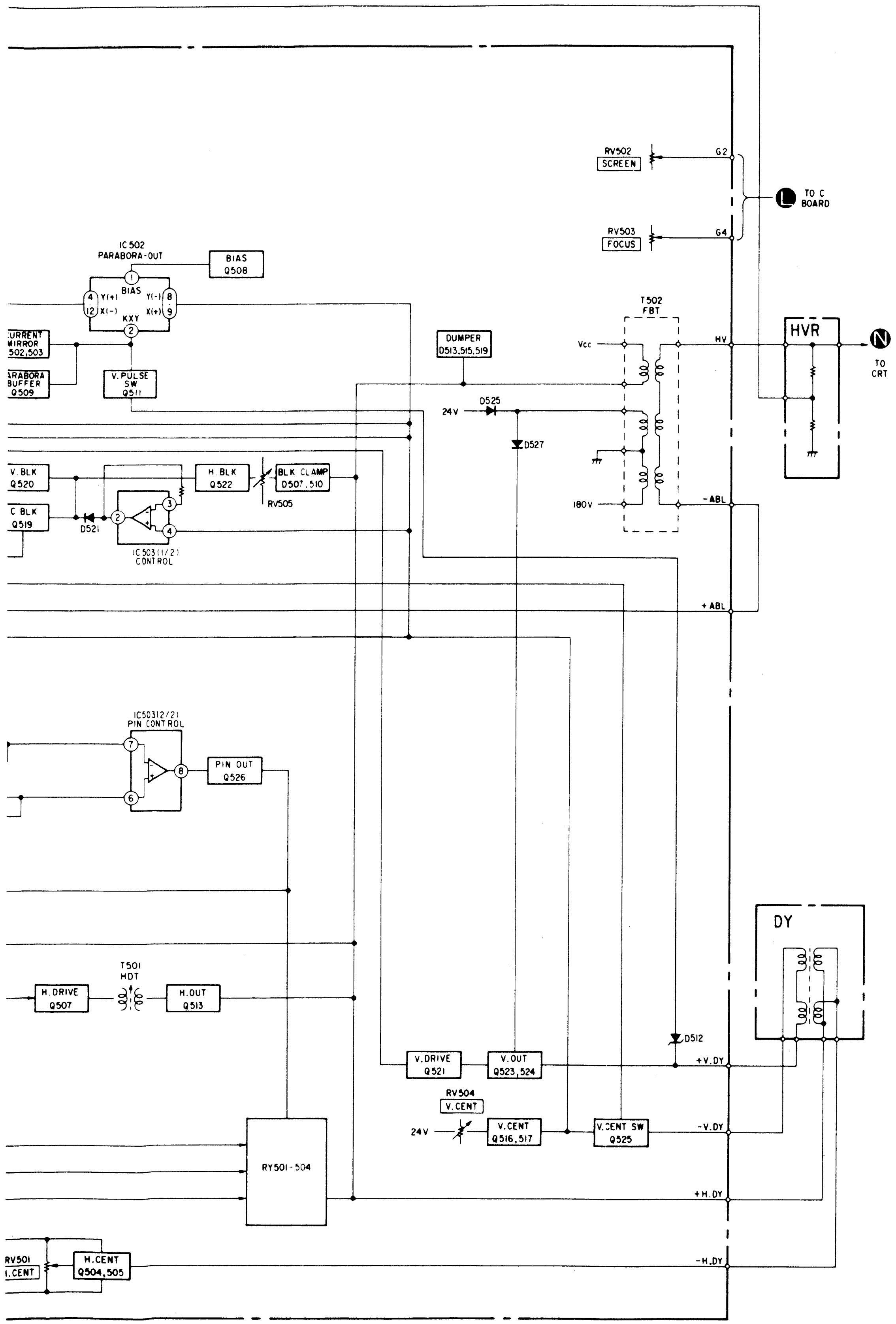

H.SIZE
V.SIZE
VSB1003(2/6)
VSB1001
H(3/7)
PIC-
PIC+
VOL+
VOL-
VSB1002(2/3)
RGB A
RGB B
LINE A
LINE B
H.SIZE SW Q1014
V.SIZE SW Q1013
SW Q1021
12V
TO A BOARD
V.SIZE
H.SIZE
SUPER IMPOSE
VSB1003(3/6)
RGB PIC
IC1004 D/A CONVERTER
IC1003 5V-REG
Vcc
PIC
VOL
DAT
CLK
RGB 1
RGB 2
LINE 1
LINE 2
LD
TO A BOARD
AV MODE
AV-SW Q1019,1022
BUFFER Q1003
ST-BY +5V
IC1001 CONTROL
IC1002 MEMORY
RESET Q1006
RBS
SO
SCLK
MCB
SI
DI
SCK
CE
DO
KEY0
KEY1
KEY2
KEY3
SCAN 3
SCAN 2
SCAN 1
SCAN 0
INV Q1007
BUFFER Q1008
DALD
LED
SIRCS BUFFER Q1015
SRCS
D1001 SW
X1001
LED SW1 Q1001
LED SW2 Q1002
LED SW4 Q1005
LED SW3 Q1004
LEDU1
LEDU2
ST-BY +5V
P.ON
RGB SEL
SIRCS
MUTE
LINE
Y/C
RGB
AV
ST-BY
TO A BOARD
TO A BOARD
TO A BOARD
TO A BOARD
G
VC
VCC-CTRL Q907
VCC
D909 OVP
VCC RECT D913-915, 920
T905
T902 PIT-1
REF
+100V-REF Q903,906
+100V CTRL Q905
T904
T901 CDT
VCC
100V
D929 +80V OVP
+100V RECT D911,912
REG.OUT Q901,902
AC RECT D901
DGC
D930 Vcc OVP
IC901 15V-CTRL
15V
+15V RECT D910,923 916-919
T906 COT
T903
D922 OVP
OVP Q904
D921 OVP
TO D2 BOARD
T907 PHT
24V
+12V RECT D908,924
TO C BOARD
H1,H2
RY901
RELAY DRY Q908
IKV Q909
ST-BY
T908
L907
L908
F901
TO D1 BOARD
+HC,-HC
HC RECT D926,934
T909 POWER TRANSFORMER
IC902 +5V REG
5V
+7V RECT D932
AC120
AC100V
15V
+15V RECT D931
P.ON
S1001 POWER
H(4/7)
T991
G1
CN901 AC IN

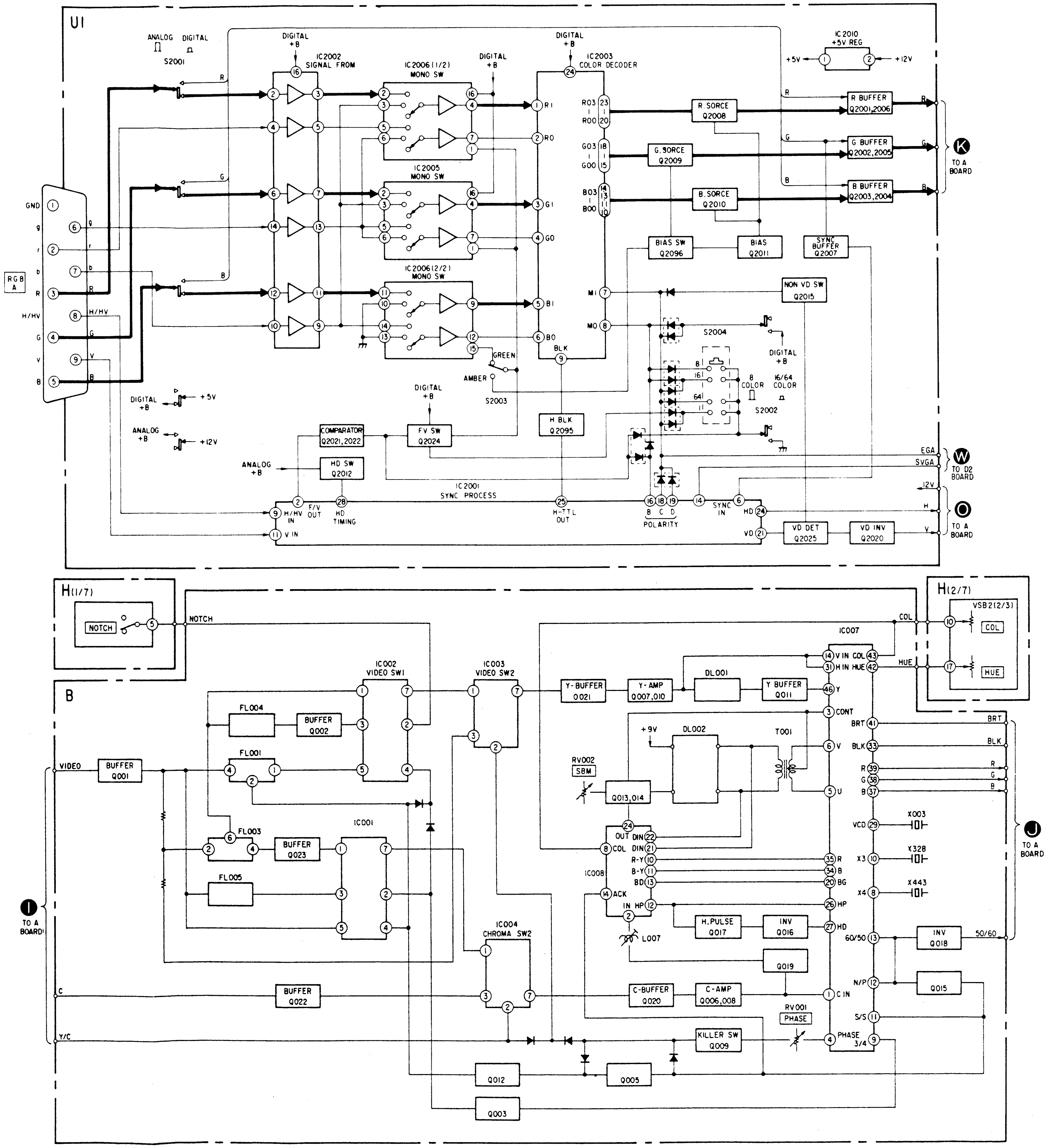

TO B BOARD
IC3004 BFFER
IC3003 BUFFER
IC3001 BUFFER
LINE VIDEO
IN
OUT
Y/C
IN
OUT
S3003 S TERMINAL
VC MUTE Q3003
VIDEO MUTE Q3004
Y/C MUTE
A
C
LINE
VIDEO
Y/C
60/50
12V
BRT
BLK
IC209 VIDEO SW
VIDEO OUT
VIDEO OUT BUFFER Q212
VIDEO AMP Q221,222
VIDEO BUFFER Q256
SUB BRT
Y/C SW Q234
VIDEO OUT
VIDEO IN
IC204 BUFFER
DHD BUFFER Q253
AHD BUFFER Q253
TERM SW Q207
J3001
IBM SEL
EXT/INT SEL
AUDIO SEL
VIDEO IN
BLUE IN
GREEN IN
BLUE IN
VIDEO OUT
ANA/DIG SEL
R.G.B NORMAL SEL
AUDIO OUT
V. SYNC
BLK IN
IBM LUMI
AUDIO IN
AV
RGB B
B
G
R
IC203 BUFFER
TERM SW Q206
IC202 BUFFER
TERM SW Q205
IC201 BUFFER
TERM SW Q204
IC207 CGA
IC208 +5V.REG
INTENSITY
IBM SEL
BLK
S3002 SUPER IMPOSE
SUPER IMP
ANA/DIG
TERM SW Q203
A/D SW Q238
A/D SW Q208,209,250
EXT/INT
VD
MODE
RGB SEL
SIRCS
RGB SEL
SIRCS IN
LINE AUDIO
Y/C AUDIO
RGB AUDIO IN
BUFFER Q3006
BUFFER Q3005
BUFFER Q3007
IC205 AUDIO SW.
LINE AUDIO
Y/C AUDIO
RGB AUDIO
AUDIO OUT
AUDIO IN
AUDIO SEL
BUFFER Q3201
BUFFER Q3202
15V
+13V REG Q218
VOL
AF IN
OUT PUT
IC206 AUDIO OUT
Y/C
R.G.B
AV
Q


I TO B BOARD
J TO B BOARD
K TO U1 BOARD
C (1/2)
C (2/2)
IC701 PIC CONTROL AMP
IC702 VIDEO AMP
RV704 R.DRV
RV703 G.DRV
RV702 B.DRV
RV705 R.BKG
RV706 G.BKG
RV707 B.BKG
RV701 SUB BRT
RV700 SUB CONT
V901 CRT
N TO HV
G TO G BOARD
L TO D1 BOARD
H1.H2
G2.G4
KR
KG
KB
BLK Q244
H.BLK Q245
RV710 LINE R BRG
RV709 LINE SUB BRT
RV711 LINE B BKG
SUB BRT
RC
GC
BC
R.BUFFER Q217
G.BUFFER Q224
B.BUFFER Q228
R.PEDESTAL BIAS Q219
G PEDESTAL BIAS Q227
B PEDESTAL BIAS Q240
IC214 RGB SW
BUFFER Q235,265
BUFFER Q232,264
BUFFER Q231,263
CLAMP
BLK
C.P
VIDEO BUFFER Q256
Y/C SW Q234
REG SW Q243,247
BIAS SW Q271
12V
VIDEO
Y/C
60/50
BRT
H(5/7)
VSB1002(3/3) BRT
VSB1003(4/6) V.HOLD
V.HOLD
V.SIZE
H.SIZE
MUTE
R TO H BOARD
B TO H BOARD
CONT
RGB
60/50
C.BLK
M TO D2 BOARD
IC213 SYNC SW
IC207 CGA
IC208 +5V REG
D-RGB REG.SW Q215,233
B IN
G IN
R IN
SEL
BLKING BUFFER Q211,274
BLK SW Q272
BLK INV Q273
CURRENT MIRROR Q200,236
PIC ABL Q229
BRT ABL Q230
ABL
RGB PIC BUFFER Q269
PIC VC SW Q275,276
VIDEO PIC BUFFER Q268
PIC VC SW Q270
RGB PIC
PIC
D TO H BOARD
REG.SW BUFFER Q249
NON SYNC SW Q246
A/D SW Q208,209,250
AV BUFFER Q261
INV Q262
F-V SW Q223,239,241,242
IC212 SYNC PROCESS
F/V DET
NON SYNC
C P-TTL OUT
H PHASE
V IN
V TTL OUT
F/V VOL OUT
H IN
H TTL OUT
SYNC IN
RV201 H.SHIFT
V.SHIFT
H (6/7)
VSB1003(5/6) V.SHIFT
LINE
X TO H BOARD
SUPER IMPOSE IN
T TO D3 BOARD
IC215 VD SHIFT
IC211 HD SHIFT
H.PHASE CONTROL Q213
IC210 SYNC SW
VD
P TO D2 BOARD
HD
Q TO D2 BOARD
SHIFT
FIX
SUPER IMPOSE OUT
S TO D3 BOARD
V TO H BOARD
U TO D2 BOARD
H (7/7)
VSB1003(6/6) H.SHIFT
H.SHIFT
RV202 H.PHASE
Y/C
RGB
AV
RGB SEL
SIRCS
AV MODE
VOL
A TO H BOARD
C TO H BOARD
T TO D3 BOARD
E TO H BOARD
O TO U1 BOARD
RGB REG SW Q210,254
SYNC SW Q225,226,255
15V
+13V REG Q218
IC206 AUDIO OUT
AF IN
OUT PUT
AF OUT
E
AUDIO
SP SPEAKER
J4001
J4002
AB
BUFFER Q3006
CLAMP Q3003
COMPARATOR Q3004,3005
BUFFER Q3001,3002
OUT
IN
SYNC CHIP CLAMP Q237
BUFFER Q214,220
SYNC SEP Q248
SYNC INV Q216
SYNC BUFFER Q251

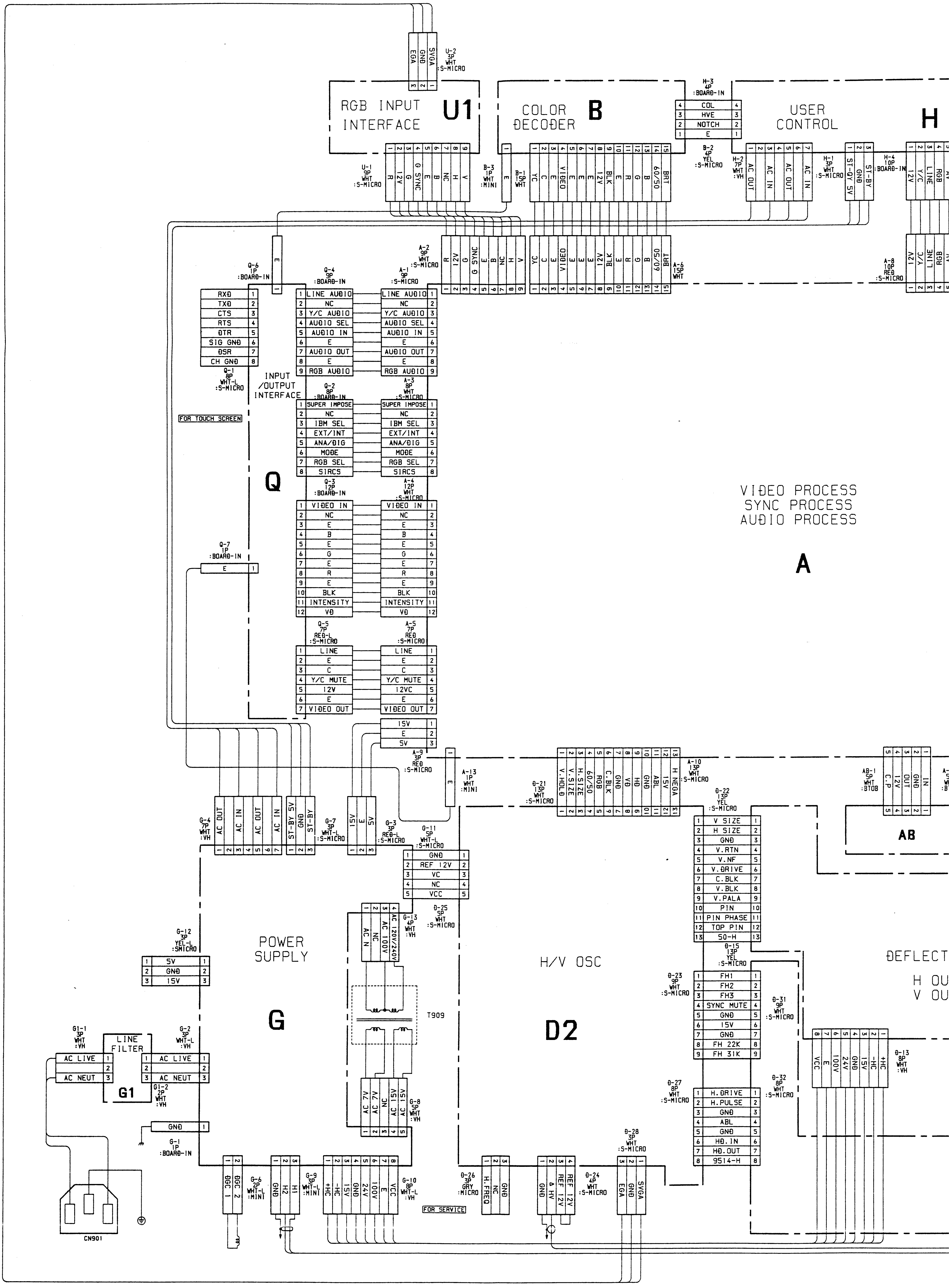
BLOCK DIAGRAM (2)


D2
P TO A BOARD
VD
BUFFER Q1500
V.SYNC SEP Q1579
RGB.V.SW Q1588
INV Q1580
VIDEO V SW Q1587
D1523
RV1500 V.PHASE
SHAPER Q1581
INV Q1582
SHAPER Q1583
SW Q1584
INV Q1585,1586
IC1504(4/5)
V SYNC SEP
INV Q1510,1536
BUFFER Q1556
VP DET Q1548
CLOCK TRIGA Q1547
V.SAW FORM Q1543
V.SAW BUFFER Q1545
RV1505 V FREQ SW
V.FREQ SW Q1519,1523 1524,1527 1529,1560
V.FEQ SW Q1550
IC1504(5/5) PROTECTOR
PRE-PROTECT Q1575,1576
IC1502 HV-BUFFER
HV
W TO U1 BOARD
SVGA
SVGA V. SIZE SW Q1594
EGA
EGA V. SIZE SW Q1595
D1501
L1503
IC1503 (2/2)
D/A CONVERTER
LOGIC
IC1506 UP DOWN COUNT
CLOCK
Q0 Q1 Q2 Q3
CARRY
OUT UP
CLOCK. MUTE Q1537
V.BIAS Q1521
V.HOLD
V.HOLD SW Q1532
V.SAW Q1522
COMPAL Q1514,1518
V.SAW BUFFER Q1509
LOGIC OUT Q1555
CURRENT MIRROR Q1512
D1503
V.SIN OUT Q1540
RGB SW Q1569
V.FREQ SW Q1561
V.FREQ SW Q1503
D1505
INV Q1501
RV1518 PIN AMP 1
PIN AMP SW1 Q1597
RV1514 PIN AMP 2
PIN AMP SW2 Q1598
RGB
RGB SW Q1592
V.LIN.SW Q1526
50/60 INV Q1593
IC1504(2/5)
V.OSC V.BLK
D1528
RV1507 BOW
PARABOLA Q1562
V.SIZE SW Q1591
V.SIZE CORR Q1531
LAMP AMP Q1564,1565
LAMP AMP Q1563
RV1509 V.ANGL
IC1504(3/5) V.DRIVE
RV1504 V LIN(1)
V.SAW BUFFER Q1542,1544
BIAS Q1549
V.SIZE BIAS Q1551
RV1512 SUB PIN
M TO A BOARD
8514-H V.BLK V.PARA PIN V DRIVE V.RTN V.NF 50H ABL V.SIZE PIN PHASE TOP PIN H.SIZE C.BLK FH22K H.PULSE H.DRIVE FH31K FH 1 FH 2 FH 3 SYNC MUTE
50/60
ABL
V.SIZE
V.SIZE SW Q1570,1589
RV1522 V.SIZE 2
V.SIZE SW Q1600,1601
RV1510 V.SIZE 1
H.SIZE SW Q1599
RV1521 H.SIZE 3
RV1601 PIN PHASE
RV1602 TOP PIN
RV1513 H.SIZE 1
D1514
RV1511 H.SIZE 2
D1513
H.SIZE
AFC SW Q1546
AFC SW Q1541
INV Q1557
5V
H.SIZE SW Q1573
H.SIZE SW Q1574
D1527
C.BLK
D1507
U TO A BOARD
FIX
SYNC AMP Q1506
IC1505(1/2) F/V CONV
50/60 SW Q1572
AFC SW Q1566
RV1516 FH22k
IC1507 (1/2)
Q TO A BOARD
HD
HD. BUFFER Q1559
SYNC MUTE Q1507
IC1504(1/5)
H.SYNC SEP
AFC
H.OSC
AMP
IC1505(2/2) F/V CONV
RV1502 H.FREQ(1)
RV1503 H.FREQ(2)
IC1507 FH COMPARATER
H.DRIVE BUFFER Q1558
RV1517 FH31k
IC1503(1/2)
IC1507 (2/2)
RV1515 VIDEO H.FREQ
H.FREQ SW Q1567
H.FREQ SW Q1602
AFC CTRL Q1516
H.DRV.DUTY Q1554
Vcc BUFFER Q1517,1520
IC1501 Vcc BUFFER
FREQ TRACK Q1508
Vcc LIMIT Q1504,1505 1511,1515
FH DET
Vcc BUFFER Q1502
REF 12V
RV1501
Vcc SW Q1568
D1508
HD IN
HD OUT
REF
VC
Vcc
F TO G BOARD
D3
T TO A BOARD
SUPER IMPOSE IN
D2516
SUPER IMPOSE BUFF Q2528
SUPER IMPOSE OUT
FIX SW Q2529
FIX SW Q2525
FIX INV Q2526
RGB
RGB BUFF Q2527
RV2504 VIDEO H SHIFT
H SHIFT SW Q2522
SHIFT
RV2505 RGB H SHIFT
H SHIFT SW Q2525
AV LINE Y/C
D2513 D2514 D2515
FIX SW Q2524
FIX
S TO A BOARD
FH 1
FH A SW Q2503,2504,2505
FH A
SYNC MUTE D2503
FH 2
FH B SW Q2506
FH 2 PIN D2505
FH B SW Q2510
SYNC MUTE D2502
FH C SW Q2507,2508
FH C
FH 3
FH SW Q2501,2502
FH
SYNC MUTE
SYNC MUTE D2501
FH PIN D2504
FH SW Q2509
FH22K
D2508
FH SW D2513
FH 22K PIN D2507
FH 22K SW Q2512
D2511
FH31K
FH 31K PIN D2506
FH 31K SW Q2511
PIN 1
D2510
RV2503 VGA H SIZE
PIN 2
H.SIZE
HD IN
HD BUFF Q2518
HD BUFF Q2520
HD OUT
RV2501 VGA H SHIFT
HD INV Q2514
HD INV Q2519
HD BUFF Q2521
HD SW Q2515
8514-H
HD SW Q2516,2517
D3
D1
IC502 PARABORA-OUT
BIAS Q508
PIN PHASE
BIAS KXY
Y(+) Y(-) X(-) X(+)
TOP PIN
CURRENT MIRROR Q502,503
V.PARA
PARABORA BUFFER Q509
V.PULSE SW Q511
V.RTN
V.NF
V.DRIVE
V.BLK
V BLK Q520
H BLK Q522
D507
RV505
C BLK Q519
D521
IC503(1/2) CONTROL
C.BLK
50H
ABL
V.SIZE
IC503(2/2) PIN CONTROL
H.SIZE
PIN
PIN 1
PIN OUT Q526
PIN 2
H.PULSE
T501 HDT
H.DRIVE
H.DRIVE Q507
H.OUT Q513
FH
FH A
FH C
RY501-5
H TO G BOARD
+HC
-HC
RV501 H.CENT
H.CENT Q504,505

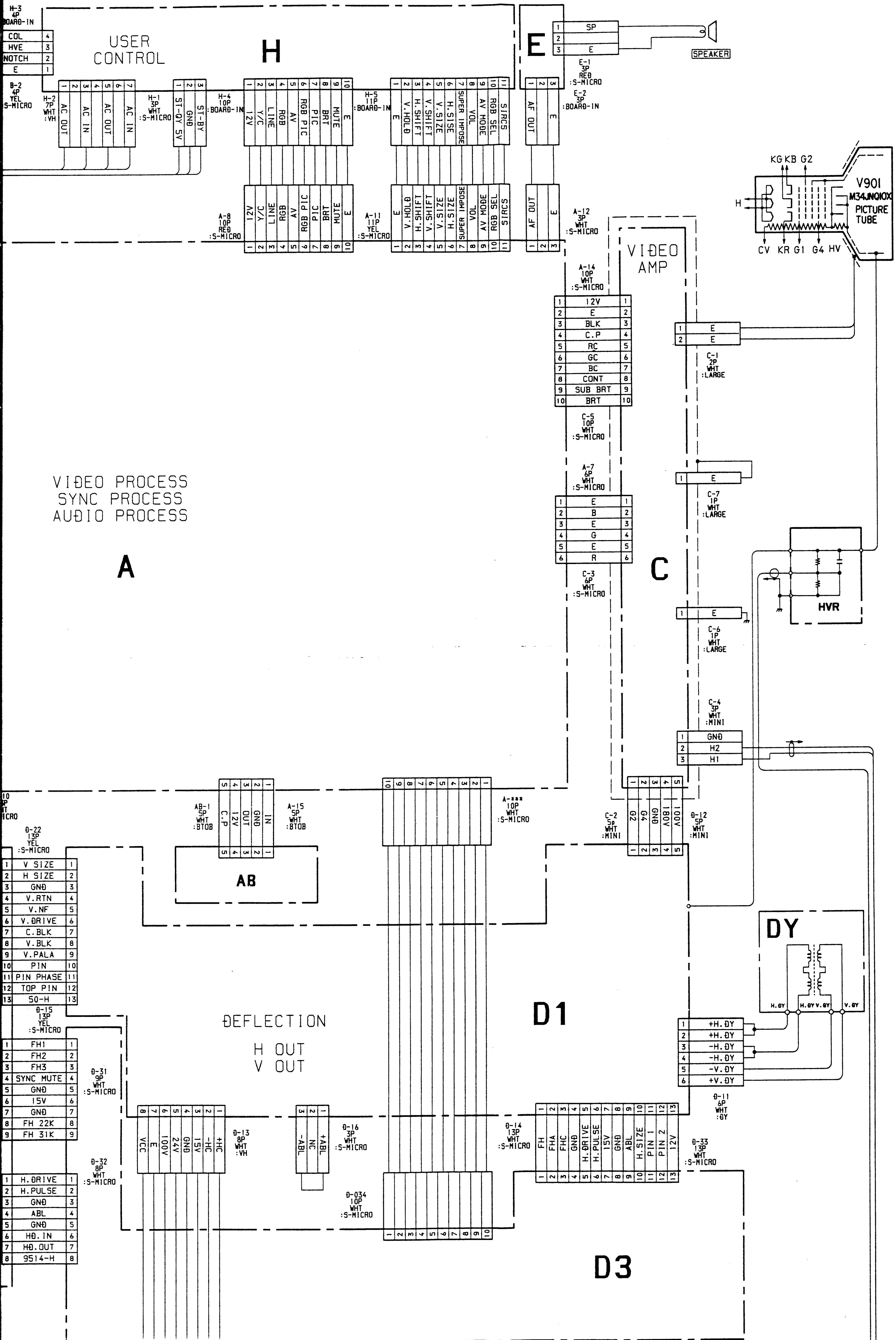

RV502 SCREEN
RV503 FOCUS
G2
G4
TO C BOARD
IC502 PARABORA-OUT
BIAS Q508
BIAS
KXY
Y(+)
X(-)
Y(-)
X(+)
URRENT MIRROR 502,503
ARABORA BUFFER Q509
V.PULSE SW Q511
DUMPER D513,515,519
T502 FBT
Vcc
HV
HVR
TO CRT
24V
D525
D527
180V
-ABL
+ABL
V.BLK Q520
H-BLK Q522
BLK CLAMP D507,510
RV505
C BLK Q519
D521
IC503(1/2) CONTROL
IC503(2/2) PIN CONTROL
PIN OUT Q526
T501 HDT
H.DRIVE Q507
H.OUT Q513
DY
D512
V.DRIVE Q521
V.OUT Q523,524
+V.DY
RV504 V.CENT
24V
V.CENT Q516,517
V.CENT SW Q525
-V.DY
RY501-504
+H.DY
RV501 .CENT
H.CENT Q504,505
-H.DY

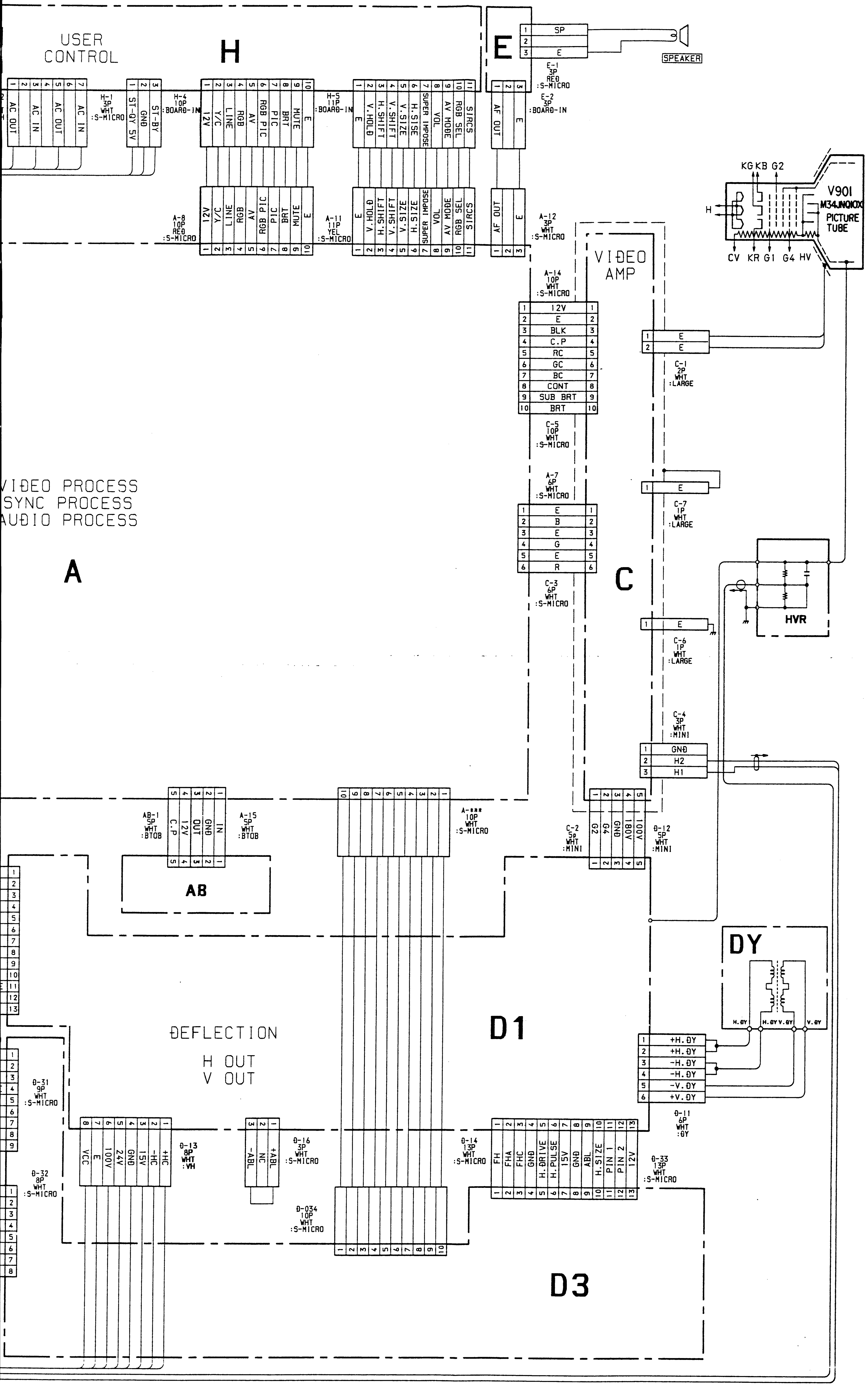

UI
ANALOG DIGITAL
S2001
DIGITAL +B
IC2002 SIGNAL FROM
IC2006(1/2) MONO SW
IC2005 MONO SW
IC2006(2/2) MONO SW
IC2003 COLOR DECODER
IC2010 +5V REG
+5V
+12V
R BUFFER Q2001,2006
G BUFFER Q2002,2005
B BUFFER Q2003,2004
R.SORCE Q2008
G.SORCE Q2009
B.SORCE Q2010
TO A BOARD
GND
RGB A
H/HV
BIAS SW Q2096
BIAS Q2011
SYNC BUFFER Q2007
NON VD SW Q2015
MI
MO
S2004
DIGITAL +B
GREEN
AMBER
S2003
BLK
8 COLOR
16/64 COLOR
S2002
H BLK Q2095
COMPARATOR Q2021,2022
FV SW Q2024
HD SW Q2012
ANALOG +B
IC2001 SYNC PROCESS
H/HV IN
F/V OUT
HD TIMING
H-TTL OUT
V IN
POLARITY
SYNC IN
HD
VD
VD DET Q2025
VD INV Q2020
EGA
SVGA
TO 02 BOARD
12V
H
V
H(1/7)
NOTCH
H(2/7)
VSB2(2/3)
COL
HUE
B
IC002 VIDEO SW1
IC003 VIDEO SW2
IC007
VIDEO
BUFFER Q001
FL004
BUFFER Q002
FL001
FL003
BUFFER Q023
FL005
IC001
Y-BUFFER Q021
Y-AMP Q007,010
DL001
Y BUFFER Q011
V IN
H IN
CONT
+9V
DL002
T001
RV002 SBM
Q013,014
IC008
OUT DIN
COL DIN
R-Y
B-Y
BD
ACK
IN HP
L007
H.PULSE Q017
INV Q016
Q019
IC004 CHROMA SW2
C
BUFFER Q022
C-BUFFER Q020
C-AMP Q006,008
RV001 PHASE
KILLER SW Q009
Y/C
Q012
Q005
Q003
BRT
BLK
R
G
B
VCO
X003
X3
X328
X4
X443
HP
HD
60/50
INV Q018
50/60
N/P
Q015
S/S
C IN
PHASE 3/4
TO A BOARD

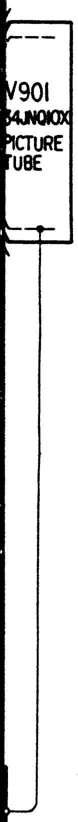
5-2. FRAME SCHEMATIC DIAGRAM



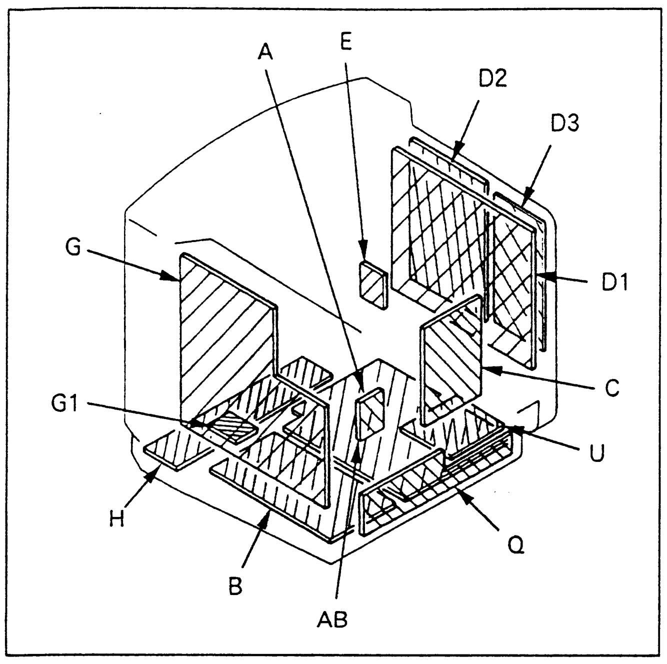
RGB INPUT INTERFACE
U1
COLOR DECODER
B
USER CONTROL
H
U-2 3P WHT :S-MICRO
EGA
GND
SVGA
U-1 9P WHT :S-MICRO
R
12V
G
G SYNC
E
B
NC
H
V
B-3 1P WHT :MINI
B-1 15P WHT
YC
C
VIDEO
12V
BLK
60/50
BRT
H-3 4P :BOARD-IN
COL
HVE
NOTCH
B-2 4P YEL :S-MICRO
H-2 7P WHT :VH
AC OUT
AC IN
H-1 3P WHT :S-MICRO
ST-BY 5V
GND
ST-BY
H-4 10P :BOARD-IN
Y/C
LINE
RGB
A-2 9P WHT :S-MICRO
A-1 9P :S-MICRO
A-6 15P WHT
A-8 10P RED :S-MICRO
Q-6 1P :BOARD-IN
Q-4 9P :BOARD-IN
RXD
TXD
CTS
RTS
DTR
SIG GND
DSR
CH GND
Q-1 8P WHT-L :S-MICRO
FOR TOUCH SCREEN
INPUT /OUTPUT INTERFACE
LINE AUDIO
NC
Y/C AUDIO
AUDIO SEL
AUDIO IN
E
AUDIO OUT
RGB AUDIO
Q-2 8P :BOARD-IN
A-3 8P WHT :S-MICRO
SUPER IMPOSE
IBM SEL
EXT/INT
ANA/DIG
MODE
RGB SEL
SIRCS
Q
Q-3 12P :BOARD-IN
A-4 12P WHT :S-MICRO
VIDEO IN
R
BLK
INTENSITY
VD
Q-7 1P :BOARD-IN
Q-5 7P RED-L :S-MICRO
A-5 7P RED :S-MICRO
LINE
C
Y/C MUTE
12V
12VC
VIDEO OUT
15V
5V
A-9 3P RED :S-MICRO
A-13 1P WHT :MINI
VIDEO PROCESS
SYNC PROCESS
AUDIO PROCESS
A
D-21 13P WHT :S-MICRO
A-10 13P WHT :S-MICRO
V.HOLD
V.SIZE
H.SIZE
60/50
RGB
C.BLK
GND
VD
HD
ABL
15V
H NEGA
AB-1 5P WHT :BTOB
C.P
OUT
IN
AB
G-4 7P WHT :VH
G-7 3P WHT-L :S-MICRO
G-3 3P RED-L :S-MICRO
G-11 5P WHT-L :S-MICRO
REF 12V
VC
VCC
D-22 13P WHT :S-MICRO
V SIZE
H SIZE
V.RTN
V.NF
V.DRIVE
C.BLK
V.BLK
V.PALA
PIN
PIN PHASE
TOP PIN
SO-H
G-13 4P WHT :VH
D-25 5P WHT :S-MICRO
AC N
AC 100V
AC 120V/240V
G-12 3P YEL-L :SMICRO
POWER SUPPLY
G
T909
H/V OSC
D2
D-15 13P YEL :S-MICRO
DEFLECT
H OU
V OU
D-23 9P WHT :S-MICRO
FH1
FH2
FH3
SYNC MUTE
FH 22K
FH 31K
D-31 9P WHT :S-MICRO
D-13 8P WHT :VH
24V
100V
+HC
-HC
G1-1 3P WHT :VH
LINE FILTER
G-2 3P WHT-L :VH
AC LIVE
AC NEUT
G1
G1-2 2P WHT :VH
G-8 5P WHT :VH
AC 7V
AC 15V
D-27 8P WHT :S-MICRO
D-32 8P WHT :S-MICRO
H.DRIVE
H.PULSE
HD.IN
HD.OUT
9514-H
G-1 1P :BOARD-IN
D-28 3P WHT :S-MICRO
CN901
DGC 1
DGC 2
G-6 2P WHT-L :MINI
H2
H1
G-9 3P WHT-L :MINI
G-10 8P WHT-L :VH
FOR SERVICE
D-26 3P GRY :MICRO
H.FREQ
A HV
D-24 4P WHT :S-MICRO


USER CONTROL
H
E
SP
SPEAKER
E-1 3P RED :S-MICRO
E-2 3P :BOARD-IN
H-3 4P BOARD-IN
COL
HVE
NOTCH
B-2 4P YEL :S-MICRO
H-2 7P WHT :VH
AC OUT
AC IN
AC OUT
AC IN
H-1 3P WHT :S-MICRO
ST-DY 5V
GND
ST-BY
H-4 10P :BOARD-IN
12V
Y/C
LINE
RGB
AV
RGB PIC
PIC
BRT
MUTE
H-5 11P :BOARD-IN
V.HOLD
H.SHIFT
V.SHIFT
V.SIZE
H.SISE
SUPER IMPOSE
VOL
AV MODE
RGB SEL
SIRCS
AF OUT
A-8 10P RED :S-MICRO
A-11 11P YEL :S-MICRO
A-12 3P WHT :S-MICRO
KG KB G2
V901
M34JNQ10X
PICTURE TUBE
CV KR G1 G4 HV
VIDEO AMP
A-14 10P WHT :S-MICRO
BLK
C.P
RC
GC
BC
CONT
SUB BRT
C-5 10P WHT :S-MICRO
C-1 2P WHT :LARGE
A-7 6P WHT :S-MICRO
B
G
R
C-3 6P WHT :S-MICRO
C-7 1P WHT :LARGE
C
HVR
C-6 1P WHT :LARGE
C-4 3P WHT :MINI
H2
H1
VIDEO PROCESS
SYNC PROCESS
AUDIO PROCESS
A
AB-1 5P WHT :BTOB
IN
A-15 5P WHT :BTOB
AB
A-*** 10P WHT :S-MICRO
C-2 5P WHT :MINI
D-12 5P WHT :MINI
G2
G4
180V
100V
D-22 13P YEL :S-MICRO
V SIZE
H SIZE
V.RTN
V.NF
V.DRIVE
C.BLK
V.BLK
V.PALA
PIN
PIN PHASE
TOP PIN
50-H
D-15 13P YEL :S-MICRO
FH1
FH2
FH3
SYNC MUTE
15V
FH 22K
FH 31K
D-31 9P WHT :S-MICRO
DEFLECTION
H OUT
V OUT
D1
DY
H.DY
V.DY
+H.DY
-H.DY
-V.DY
+V.DY
D-11 6P WHT :DY
D-13 8P WHT :VH
VCC
100V
24V
+HC
-HC
D-16 3P WHT :S-MICRO
+ABL
NC
-ABL
D-14 13P WHT :S-MICRO
FH
FHA
FHC
H.DRIVE
H.PULSE
ABL
H.SIZE
PIN 1
PIN 2
D-33 13P WHT :S-MICRO
D-32 8P WHT :S-MICRO
HD.IN
HD.OUT
9514-H
D-034 10P WHT :S-MICRO
D3


USER CONTROL
H
E
SPEAKER
SP
E
E-1 3P RED :S-MICRO
E-2 3P :BOARD-IN
AF OUT
AC OUT
AC IN
AC OUT
AC IN
H-1 3P WHT :S-MICRO
ST-BY 5V
GND
ST-BY
H-4 10P :BOARD-IN
12V
Y/C
LINE
RGB
AV
RGB PIC
PIC
BRT
MUTE
E
H-5 11P :BOARD-IN
E
V.HOLD
H.SHIFT
V.SHIFT
V.SIZE
H.SISE
SUPER IMPOSE
VOL
AV MODE
RGB SEL
SIRCS
A-8 10P RED :S-MICRO
A-11 11P YEL :S-MICRO
A-12 3P WHT :S-MICRO
H.SIZE
KG KB G2
H
V901
M34JNQ10X
PICTURE TUBE
CV KR G1 G4 HV
VIDEO AMP
A-14 10P WHT :S-MICRO
12V
E
BLK
C.P
RC
GC
BC
CONT
SUB BRT
BRT
C-5 10P WHT :S-MICRO
C-1 2P WHT :LARGE
C-7 1P WHT :LARGE
A-7 6P WHT :S-MICRO
E
B
E
G
E
R
C-3 6P WHT :S-MICRO
VIDEO PROCESS
SYNC PROCESS
AUDIO PROCESS
A
C
HVR
C-6 1P WHT :LARGE
C-4 3P WHT :MINI
GND
H2
H1
AB-1 5P WHT :BTOB
C.P
12V
OUT
GND
IN
A-15 5P WHT :BTOB
AB
A-*** 10P WHT :S-MICRO
C-2 5p WHT :MINI
G2
G4
GND
180V
100V
D-12 5P WHT :MINI
DY
H.DY
H.DY V.DY
V.DY
+H.DY
+H.DY
-H.DY
-H.DY
-V.DY
+V.DY
D-11 6P WHT :DY
DEFLECTION
H OUT
V OUT
D1
D-31 9P WHT :S-MICRO
D-32 8P WHT :S-MICRO
E
VCC
100V
24V
GND
15V
-HC
+HC
D-13 8P WHT :VH
-ABL
NC
+ABL
D-16 3P WHT :S-MICRO
D-034 10P WHT :S-MICRO
D-14 13P WHT :S-MICRO
FH
FHA
FHC
GND
H.DRIVE
H.PULSE
15V
GND
ABL
H.SIZE
PIN 1
PIN 2
12V
D-33 13P WHT :S-MICRO
D3



5-3. CIRCUIT BOARDS LOCATION



Note :

- All capacitors are in μ F unless otherwise noted. pF : μ μ F 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : ¼W

- All resistors are in ohms.
  k Ω =1000 Ω, M Ω =1000K Ω
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- △ : internal component.
- ☐ : panel designation or adjustment for repair.
- All variable and adjustable resistors have charactristic curve B, unless otherwise noted.

  *Adjustment resistor measurement impossibility
  (D2 BOARD R1670, R1678, R1729)

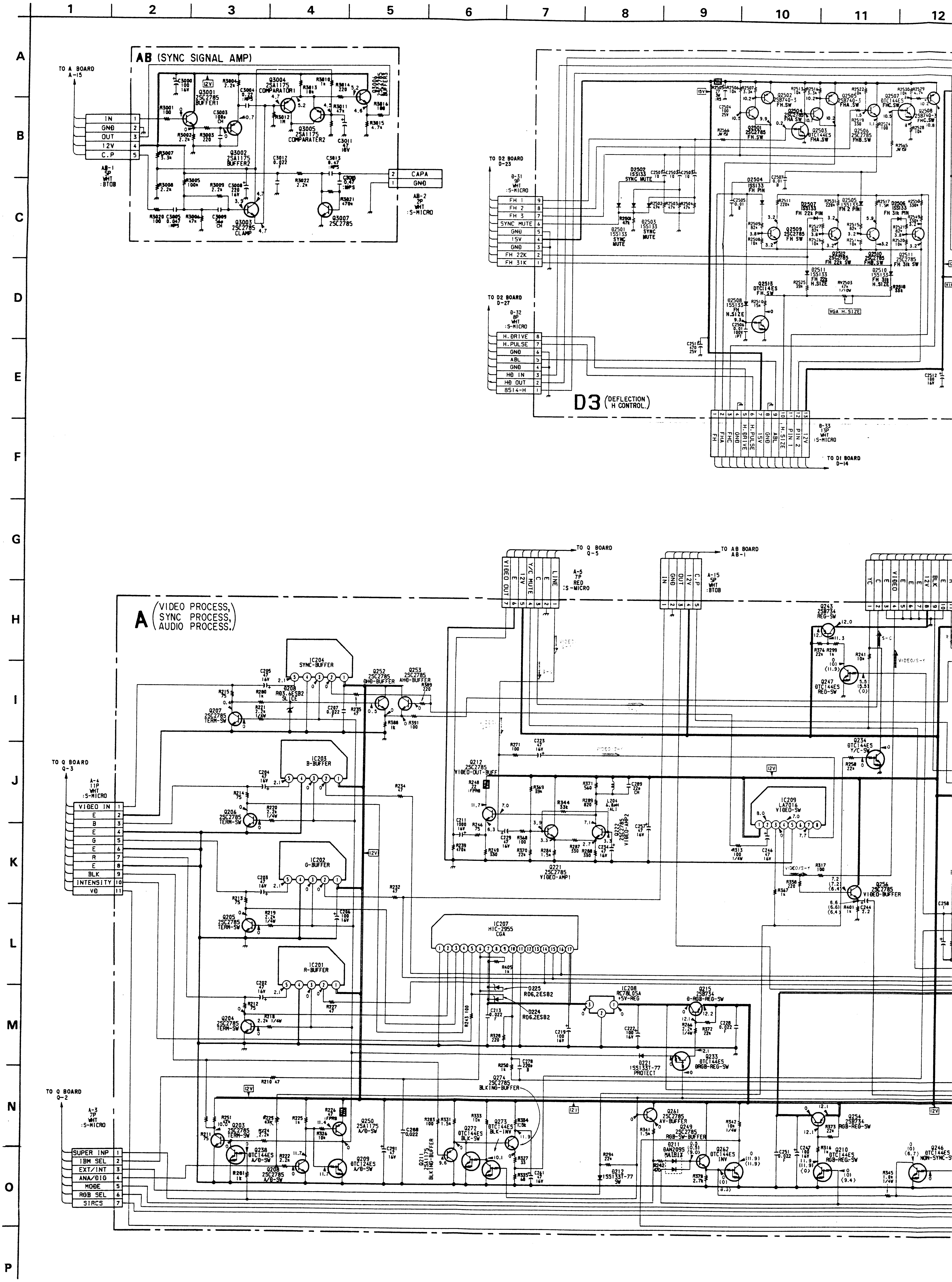
- Circled numbers refer to waveforms.
- All voltages are in V.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10M Ω digital multimeter.
- Voltage variations may be noted due to normal production tolerances.
- ✕ : Can not be measured.
- V : B+ bus.
- V : B− bus.
- ⇨ : signal path.
- No mark : with PAL color-bar signal received or common voltage.
- For the respective voltage ratings in PAL, SECAM, NTSC3.58, NTSC4.43, S-VIDEO, and DIGITAL modes, see the table.
- ( ) : S-VIDEO
- < > : DIGITAL

Reference information

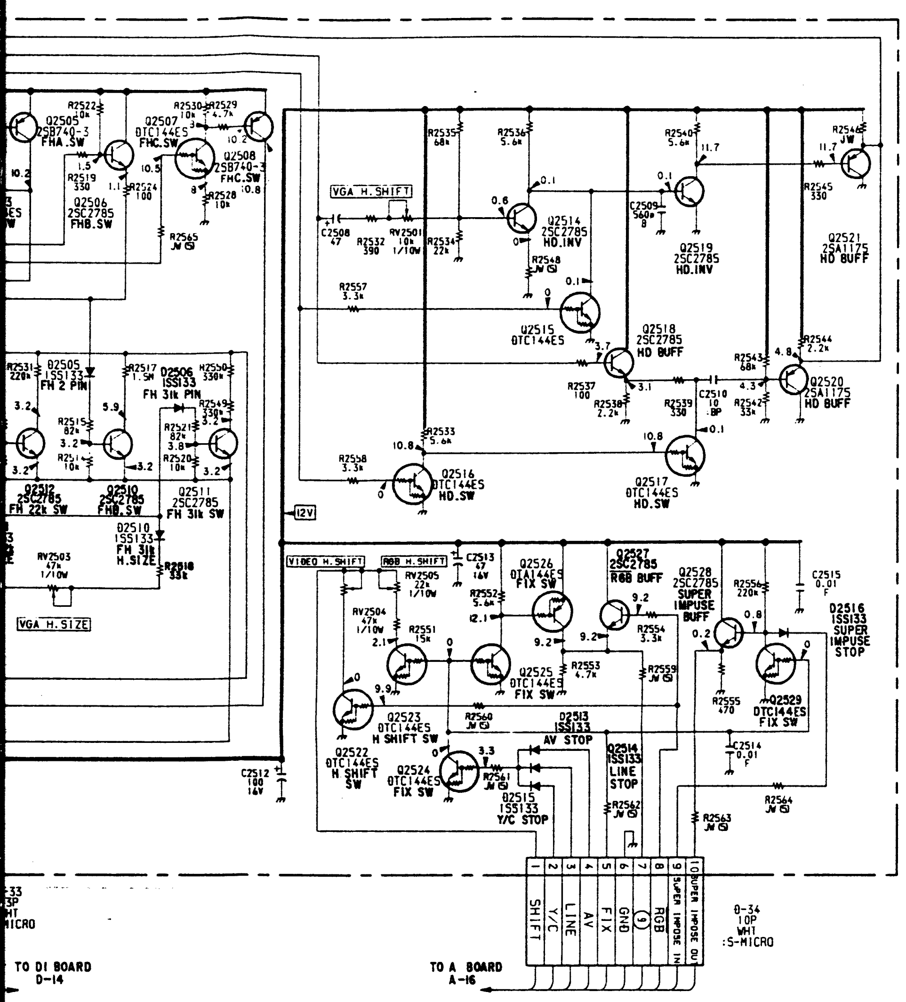
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RW	: NONFLAMMABLE WIREWOUND
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

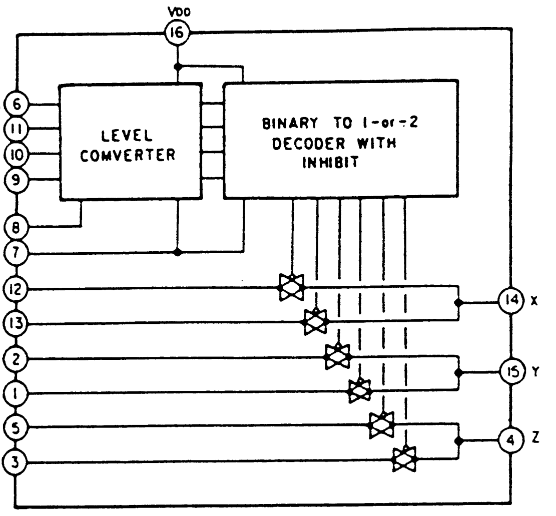
5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS


AB (SYNC SIGNAL AMP)
TO A BOARD A-15
IN
GND
OUT
12V
C.P
AB-1 5P WHT :BTOB
Q3001 2SC2785 BUFFER1
Q3002 2SA1175 BUFFER2
Q3003 2SC2785 CLAMP
Q3004 2SA1175 COMPARATOR1
Q3005 2SA1175 COMPARATER2
Q3006 2SC2785 BUFFER3
Q3007 2SC2785
CAPA
GND
AB-2 2P WHT :S-MICRO
TO D2 BOARD D-23
D-31 9P WHT :S-MICRO
FH 1
FH 2
FH 3
SYNC MUTE
GND
15V
GND
FH 22K
FH 31K
TO D2 BOARD D-27
D-32 8P WHT :S-MICRO
H.DRIVE
H.PULSE
GND
ABL
GND
HD IN
HD OUT
8514-H
D3 (DEFLECTION H CONTROL.)
D2502 1SS133 SYNC MUTE
D2501 1SS133 SYNC MUTE
D2503 1SS133 SYNC MUTE
Q2501 2SC2785 FH.SW
Q2502 2SB740-3 FH.SW
Q2503 DTC144ES FHA.SW
Q2504 2SC2785 FHA SW
Q2505 2SB740-3 FHA SW
Q2506 2SC2785 FHB.SW
Q2507 DTC144ES FHC.SW
Q2508 2SB740-3 FHC.SW
Q2509 2SC2785 FH SW
Q2510 2SC2785 FHB.SW
Q2511 2SC2785 FH 31k SW
Q2512 2SC2785 FH 22k SW
Q2513 DTC144ES FH.SW
D2504 1SS133 FH PIN
D2505 1SS133 FH 2 PIN
D2506 1SS133 FH 31k PIN
D2507 1SS133 FH 22k PIN
D2508 1SS133 FH H.SIZE
D2510 1SS133 FH 31k H.SIZE
D2511 1SS133 FH 22k H.SIZE
RV2503 47k 1/10W
VGA H.SIZE
FH
FHA
FHC
GND
H.DRIVE
H.PULSE
15V
GND
ABL
H.SIZE
PIN 1
PIN 2
12V
D-33 13P WHT :S-MICRO
TO D1 BOARD D-14
TO Q BOARD Q-5
VIDEO OUT
12V
Y/C MUTE
C
E
LINE
A-5 7P RED :S-MICRO
TO AB BOARD AB-1
IN
GND
OUT
12V
C.P
A-15 5P WHT :BTOB
YC
C
VIDEO
E
E
12V
BLK
A (VIDEO PROCESS, SYNC PROCESS, AUDIO PROCESS.)
IC204 SYNC-BUFFER
IC203 B-BUFFER
IC202 G-BUFFER
IC201 R-BUFFER
D208 RD3.6ESB2 SLICE
Q207 2SC2785 TERM-SW
Q206 2SC2785 TERM-SW
Q205 2SC2785 TERM-SW
Q204 2SC2785 TERM-SW
Q252 2SC2785 DHD-BUFFER
Q253 2SC2785 AHD-BUFFER
TO Q BOARD Q-3
A-6 11P WHT :S-MICRO
VIDEO IN
E
B
E
G
E
R
E
BLK
INTENSITY
VD
Q212 2SC2785 VIDEO-OUT-BUFF
Q221 2SC2785 VIDEO-AMP1
Q222 2SC2785 VIDEO-AMP2
IC209 LA7016 VIDEO-SW
IC207 HIC-2955 CGA
D225 RD6.2ESB2
D224 RD6.2ESB2
IC208 RC78L05A +5V-REG
Q215 2SB734 B-RGB-REG-SW
Q233 DTC144ES BRGB-REG-SW
D221 1SS133T-77 PROTECT
Q243 2SB734 REG-SW
Q247 DTC144ES REG-SW
Q234 DTC144ES Y/C-SW
Q256 2SC2785 VIDEO-BUFFER
Q274 2SC2785 BLKING-BUFFER
TO Q BOARD Q-2
A-3 7P WHT :S-MICRO
SUPER INP
IBM SEL
EXT/INT
ANA/DIG
MODE
RGB SEL
SIRCS
Q203 2SC2785 TERM-SW
Q238 DTC144ES A/D-SW
Q208 2SC2785 A/D-SW
Q250 2SA1175 A/D-SW
Q209 DTC124ES A/D-SW
Q211 2SA1175 BLKING-BUFFER
Q272 DTC144ES BLK-SW
Q273 DTC144ES BLK-INV
D212 1SS133T-77 SW
Q261 2SC2785 AV-BUFFER
Q249 2SC2785 RGB-SW-BUFFER
D211 BAW209S MA151X
Q262 DTC144ES INV
Q254 2SB734 RGB-REG-SW
Q210 DTC144ES RGB-REG-SW
Q246 DTC144ES NON-SYNC-SW
12V
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I J K L M N O P

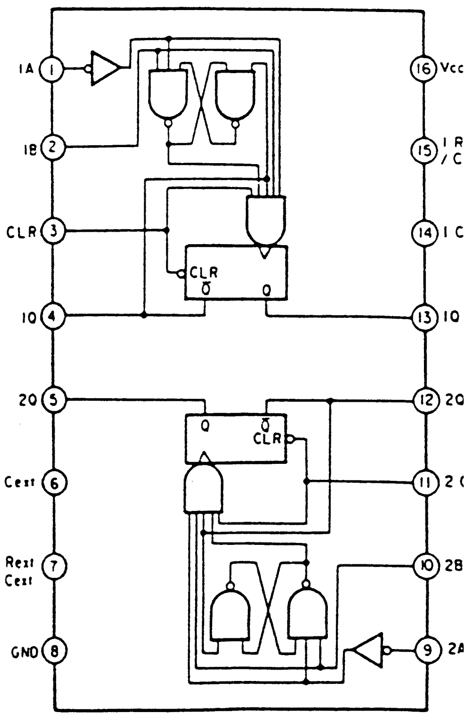
11 12 13 14 15 16 17 18 19 20 21 22

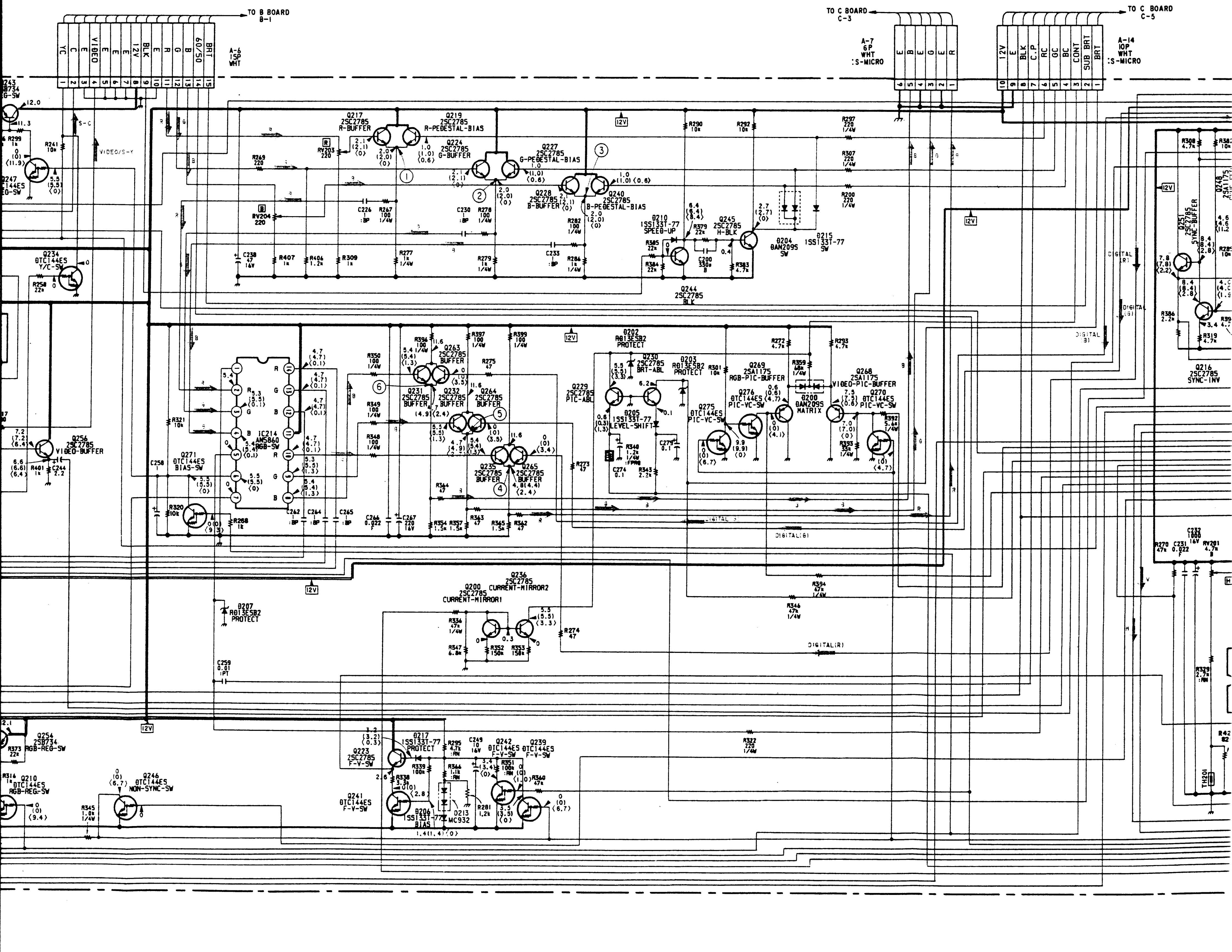

VGA H.SHIFT
VGA H.SIZE
VIDEO H.SHIFT
RGB H.SHIFT
Q2505 2SB740-3 FHA.SW
Q2507 DTC144ES FHC.SW
Q2508 2SB740-3 FHC.SW
Q2506 2SC2785 FHB.SW
Q2514 2SC2785 HD.INV
Q2515 DTC144ES
Q2518 2SC2785 HD BUFF
Q2519 2SC2785 HD.INV
Q2521 2SA1175 HD BUFF
Q2520 2SA1175 HD BUFF
Q2516 DTC144ES HD.SW
Q2517 DTC144ES HD.SW
D2505 1SS133 FH 2 PIN
D2506 1SS133 FH 3k PIN
Q2512 2SC2785 FH 22k SW
Q2510 2SC2785 FHB.SW
Q2511 2SC2785 FH 3k SW
D2510 1SS133 FH 3k H.SIZE
Q2526 DTC144ES FIX SW
Q2527 2SC2785 RGB BUFF
Q2528 2SC2785 SUPER IMPUSE BUFF
D2516 1SS133 SUPER IMPUSE STOP
Q2525 DTC144ES FIX SW
Q2529 DTC144ES FIX SW
Q2523 DTC144ES H SHIFT SW
Q2522 DTC144ES H SHIFT SW
Q2524 DTC144ES FIX SW
D2513 1SS133 AV STOP
D2514 1SS133 LINE STOP
D2515 1SS133 Y/C STOP
12V
SHIFT
Y/C
LINE
AV
FIX
GND
RGB
SUPER IMPUSE IN
SUPER IMPUSE OUT
B-34 10P WHT :S-MICRO
TO A BOARD A-16
TO DI BOARD D-14
MICRO

A BOARD
IC205, IC213 MC14053BCP

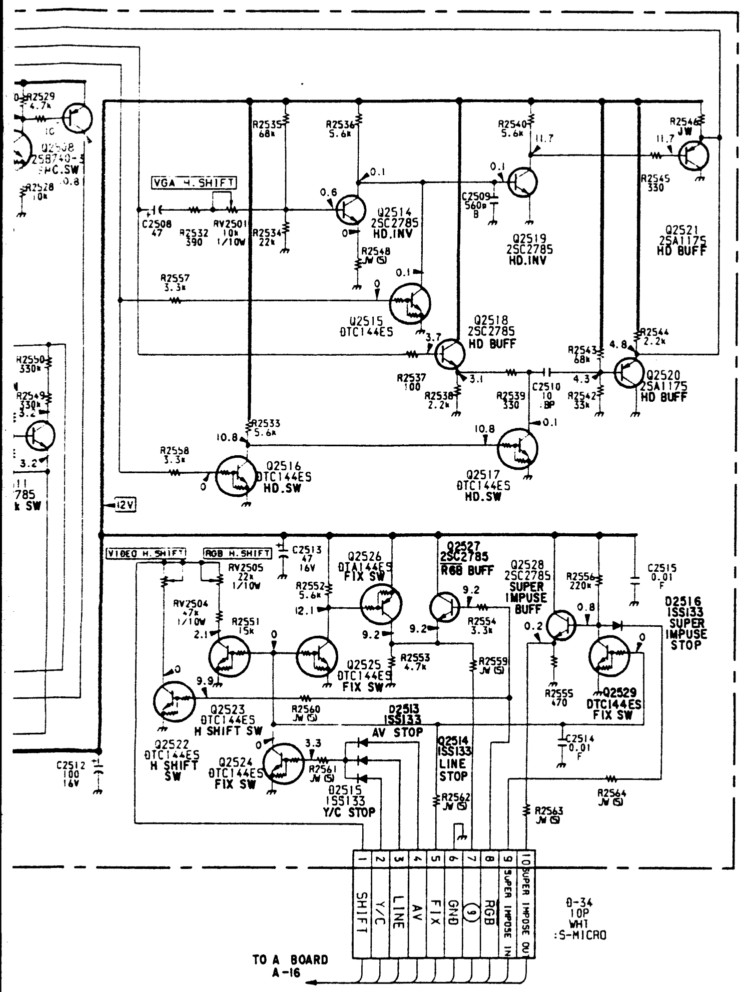

VDD 16
IMH 6
A 11
B 10
C 9
Vss 8
VEE 7
X0 12
X1 13
Y0 2
Y1 1
Z0 5
Z1 3
LEVEL COMVERTER
BINARY TO 1-or-2 DECODER WITH INHIBIT
14 X
15 Y
4 Z

A BOARD
IC211, IC215 SN74LS221N

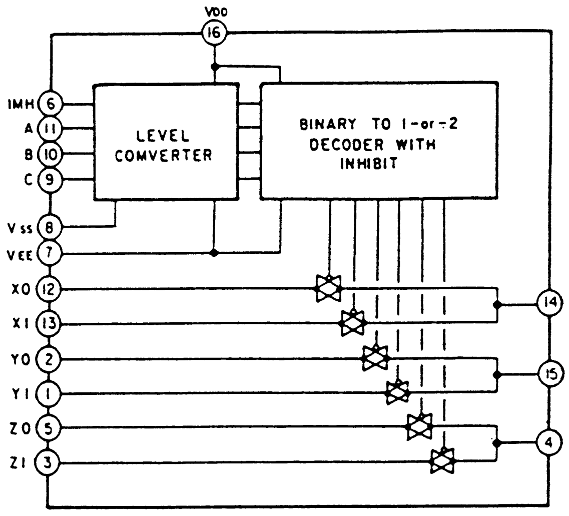

1A 1
1B 2
1 CLR 3
1Q 4
2Q 5
2 Cext 6
2 Rext / Cext 7
GND 8
16 Vcc
15 1R /C
14 1C
13 1Q
12 2Q
11 2C
10 2B
9 2A
CLR
Q
CLR


TO B BOARD B-1
YC
C
VIDEO
E
E
E
12V
BLK
E
R
G
B
BRT
60/50
A-6 15P WHT
TO C BOARD C-3
A-7 6P WHT :S-MICRO
TO C BOARD C-5
A-14 10P WHT :S-MICRO
12V
BLK
C.P
RC
GC
BC
CONT
SUB BRT
BRT
Q217 2SC2785 R-BUFFER
Q219 2SC2785 R-PEDESTAL-BIAS
Q224 2SC2785 G-BUFFER
Q227 2SC2785 G-PEDESTAL-BIAS
Q228 2SC2785 B-BUFFER
Q240 2SC2785 B-PEDESTAL-BIAS
D210 1SS133T-77 SPEED-UP
Q245 2SC2785 H-BLK
D204 8AN2095 SW
D215 1SS133T-77 SW
Q244 2SC2785 BLK
Q234 DTC144ES Y/C-SW
Q256 2SC2785 VIDEO-BUFFER
IC214 AN5860 RGB-SW
Q271 DTC144ES BIAS-SW
Q263 2SC2785 BUFFER
Q231 2SC2785 BUFFER
Q232 2SC2785 BUFFER
Q264 2SC2785 BUFFER
Q235 2SC2785 BUFFER
Q265 2SC2785 BUFFER
D202 RD13ESB2 PROTECT
Q230 2SC2785 BRT-ABL
D203 RD13ESB2 PROTECT
Q229 2SC2785 PIC-ABL
D205 1SS133T-77 LEVEL-SHIFT
Q269 2SA1175 RGB-PIC-BUFFER
Q276 DTC144ES PIC-VC-SW
Q275 DTC144ES PIC-VC-SW
D200 8AN2095 MATRIX
Q268 2SA1175 VIDEO-PIC-BUFFER
Q270 DTC144ES PIC-VC-SW
Q216 2SC2785 SYNC-INV
Q251 2SC2785 SYNC-BUFFER
Q248 2SA1175
D207 RD13ESB2 PROTECT
Q236 2SC2785 CURRENT-MIRROR2
Q200 2SC2785 CURRENT-MIRROR1
Q254 2SB734 RGB-REG-SW
Q210 DTC144ES RGB-REG-SW
Q246 DTC144ES NON-SYNC-SW
Q223 2SC2785 F-V-SW
D217 1SS133T-77 PROTECT
Q242 DTC144ES F-V-SW
Q239 DTC144ES F-V-SW
Q241 DTC144ES F-V-SW
D206 1SS133T-77 BIAS
D213 MC932
Q243 2SB734 REG-SW
Q247 DTC144ES REG-SW
VIDEO/S-Y
DIGITAL(R)
DIGITAL(B)
DIGITAL(G)
TH201
12V

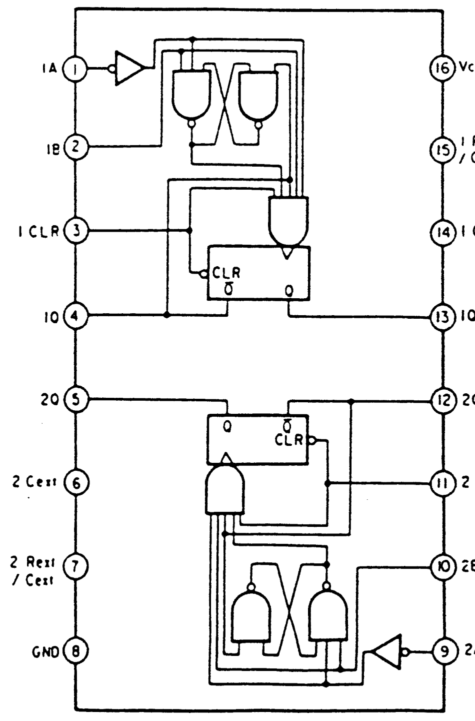
12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

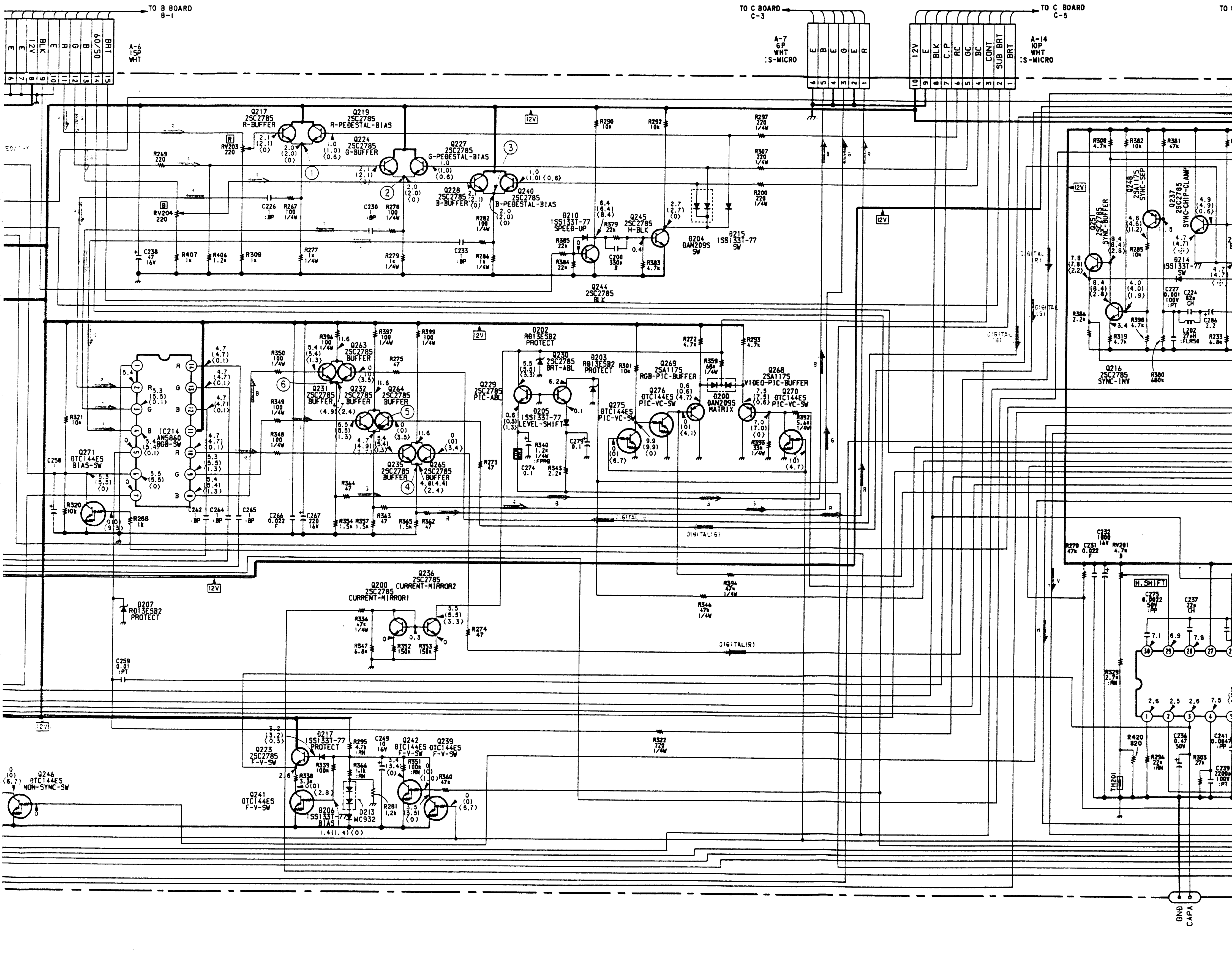

VGA H.SHIFT
Q2514 2SC2785 HD.INV
Q2519 2SC2785 HD.INV
Q2521 2SA1175 HD BUFF
Q2515 DTC144ES
Q2518 2SC2785 HD BUFF
Q2520 2SA1175 HD BUFF
Q2516 DTC144ES HD.SW
Q2517 DTC144ES HD.SW
VIDEO H.SHIFT
RGB H.SHIFT
Q2526 DTA144ES FIX SW
Q2527 2SC2785 RGB BUFF
Q2528 2SC2785 SUPER IMPUSE BUFF
D2516 1SS133 SUPER IMPUSE STOP
Q2525 DTC144ES FIX SW
Q2529 DTC144ES FIX SW
Q2523 DTC144ES H SHIFT SW
Q2522 DTC144ES H SHIFT SW
Q2524 DTC144ES FIX SW
D2513 1SS133 AV STOP
Q2514 1SS133 LINE STOP
Q2515 1SS133 Y/C STOP
SHIFT
Y/C
LINE
AV
FIX
GND
(9)
RGB
SUPER IMPOSE IN
B-34 10P WHT :S-MICRO
TO A BOARD A-16

A BOARD
IC205, IC213 MC14053BCP

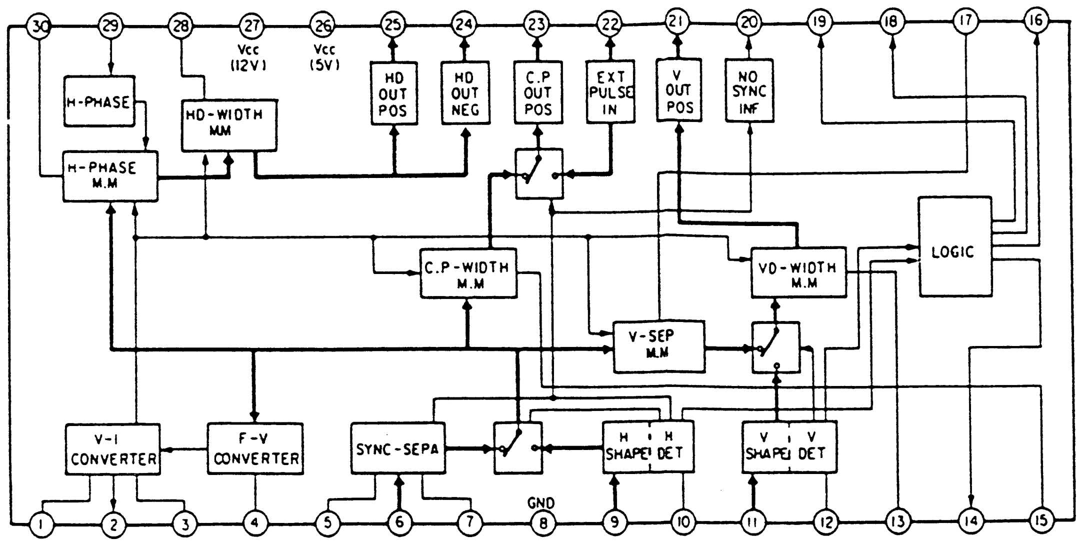

VDD
16
IMH 6
A 11
B 10
C 9
Vss 8
VEE 7
X0 12
X1 13
Y0 2
Y1 1
Z0 5
Z1 3
LEVEL COMVERTER
BINARY TO 1-or-2 DECODER WITH INHIBIT
14 X
15 Y
4 Z

A BOARD
IC211, IC215 SN74LS221N

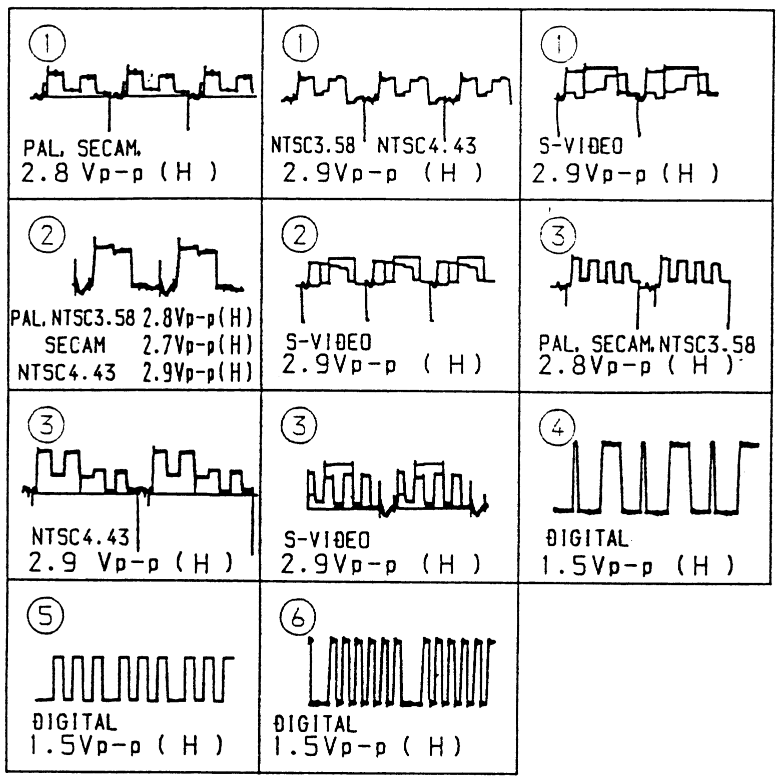

1A 1
1B 2
1 CLR 3
1Q 4
2Q 5
2 Cext 6
2 Rext / Cext 7
GND 8
16 Vcc
15 1 Rext / Cext
14 1 Cext
13 1Q
12 2Q
11 2 CLR
10 2B
9 2A
CLR
Q

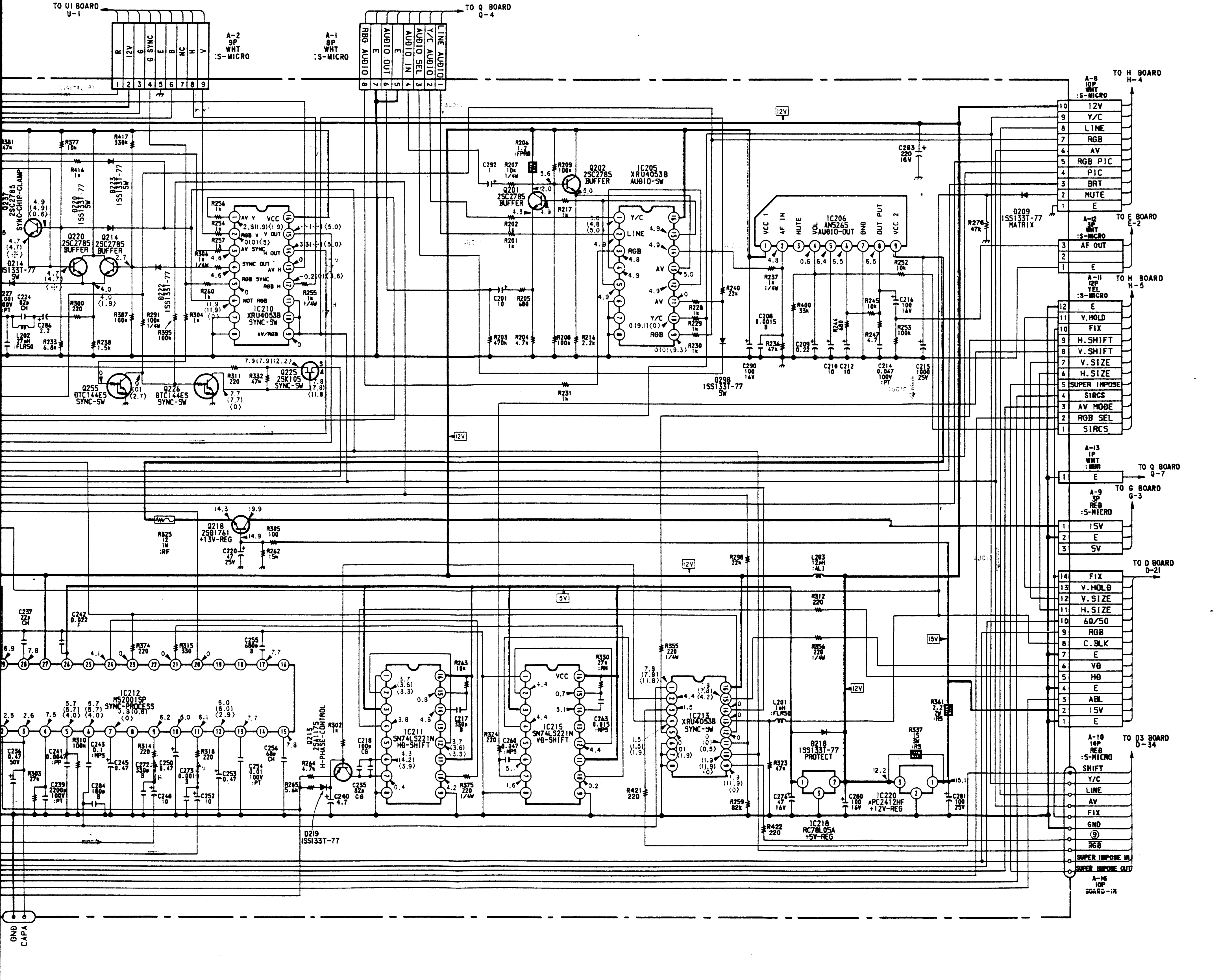

TO B BOARD B-1
A-6 15P WHT
TO C BOARD C-3
A-7 6P WHT :S-MICRO
TO C BOARD C-5
A-14 10P WHT :S-MICRO
Q217 2SC2785 R-BUFFER
Q219 2SC2785 R-PEDESTAL-BIAS
Q224 2SC2785 G-BUFFER
Q227 2SC2785 G-PEDESTAL-BIAS
Q228 2SC2785 B-BUFFER
Q240 2SC2785 B-PEDESTAL-BIAS
D210 1SS133T-77 SPEED-UP
Q245 2SC2785 H-BLK
D204 BAN209S SW
D215 1SS133T-77 SW
Q244 2SC2785 BLK
IC214 AN5860 RGB-SW
Q271 DTC144ES BIAS-SW
Q263 2SC2785 BUFFER
Q231 2SC2785 BUFFER
Q232 2SC2785 BUFFER
Q264 2SC2785 BUFFER
Q235 2SC2785 BUFFER
Q265 2SC2785 BUFFER
D202 RD13ESB2 PROTECT
Q230 2SC2785 BRT-ABL
D203 RD13ESB2 PROTECT
Q229 2SC2785 PTC-ABL
D205 1SS133T-77 LEVEL-SHIFT
Q269 2SA1175 RGB-PIC-BUFFER
Q276 DTC144ES PIC-VC-SW
Q275 DTC144ES PIC-VC-SW
D200 BAN209S MATRIX
Q268 2SA1175 VIDEO-PIC-BUFFER
Q270 DTC144ES PIC-VC-SW
Q251 2SC2785 SYNC-BUFFER
Q248 2SA1175 SYNC-SEP
Q237 2SC2785 SYNC-CHIP-CLAMP
D214 1SS133T-77
Q216 2SC2785 SYNC-INV
D207 RD13ESB2 PROTECT
Q236 2SC2785 CURRENT-MIRROR2
Q200 2SC2785 CURRENT-MIRROR1
DIGITAL(R)
DIGITAL(G)
DIGITAL(B)
D217 1SS133T-77 PROTECT
Q223 2SC2785 F-V-SW
Q242 DTC144ES F-V-SW
Q239 DTC144ES F-V-SW
Q246 DTC144ES NON-SYNC-SW
Q241 DTC144ES F-V-SW
D206 1SS133T-77 BIAS
D213 MC932
H.SHIFT
TH201
GND CAPA

A BOARD
IC212 M52001SP


H-PHASE
HD-WIDTH M.M
H-PHASE M.M
Vcc (12V)
Vcc (5V)
HD OUT POS
HD OUT NEG
C.P OUT POS
EXT PULSE IN
V OUT POS
NO SYNC INF
LOGIC
C.P-WIDTH M.M
VD-WIDTH M.M
V-SEP M.M
V-I CONVERTER
F-V CONVERTER
SYNC-SEPA
H SHAPE H DET
V SHAPE V DET
GND

A BOARD WAVEFORMS




TO UI BOARD U-1
TO Q BOARD Q-4
A-2 9P WHT :S-MICRO
A-1 8P WHT :S-MICRO
R 12V G G SYNC E B NC H V
RBG AUDIO E AUDIO OUT E AUDIO IN AUDIO SEL Y/C AUDIO LINE AUDIO
TO H BOARD H-4
A-8 10P WHT :S-MICRO
12V Y/C LINE RGB AV RGB PIC PIC BRT MUTE E
TO E BOARD E-2
A-12 3P WHT :S-MICRO
AF OUT E
TO H BOARD H-5
A-11 12P YEL :S-MICRO
E V.HOLD FIX H.SHIFT V.SHIFT V.SIZE H.SIZE SUPER IMPOSE SIRCS AV MODE RGB SEL SIRCS
A-13 1P WHT
TO Q BOARD Q-7
TO G BOARD G-3
A-9 3P RED :S-MICRO
15V E 5V
TO D BOARD D-21
FIX V.HOLD V.SIZE H.SIZE 60/50 RGB C.BLK E VD HD E ABL 15V E
TO D3 BOARD D-34
A-10 14P RED :S-MICRO
SHIFT Y/C LINE AV FIX GND ⑨ RGB SUPER IMPOSE IN SUPER IMPOSE OUT
A-16 10P BOARD-IN
Q237 SYNC-CHIP-CLAMP
Q220 2SC2785 BUFFER
Q214 2SC2785 BUFFER
IC210 XRU4053B SYNC-SW
Q255 DTC144ES SYNC-SW
Q226 DTC144ES SYNC-SW
Q225 2SK105 SYNC-SW
Q201 2SC2785 BUFFER
Q202 2SC2785 BUFFER
IC205 XRU4053B AUDIO-SW
IC206 AN5265 AUDIO-OUT
VCC 1 AF IN MUTE VOL GND OUT PUT VCC 2
D209 1SS133T-77 MATRIX
D298 1SS133T-77 SW
Q218 2SD1761 +13V-REG
IC212 M52001SP SYNC-PROCESS
Q217 2SA1175 H-PHASE-CONTROL
D219 1SS133T-77
IC211 SN74LS221N HD-SHIFT
IC215 SN74LS221N VD-SHIFT
IC213 XRU4053B SYNC-SW
D218 1SS133T-77 PROTECT
IC218 RC78L05A +5V-REG
IC220 µPC2412HF +12V-REG
12V 5V 15V
GND CAPA

ABOARD

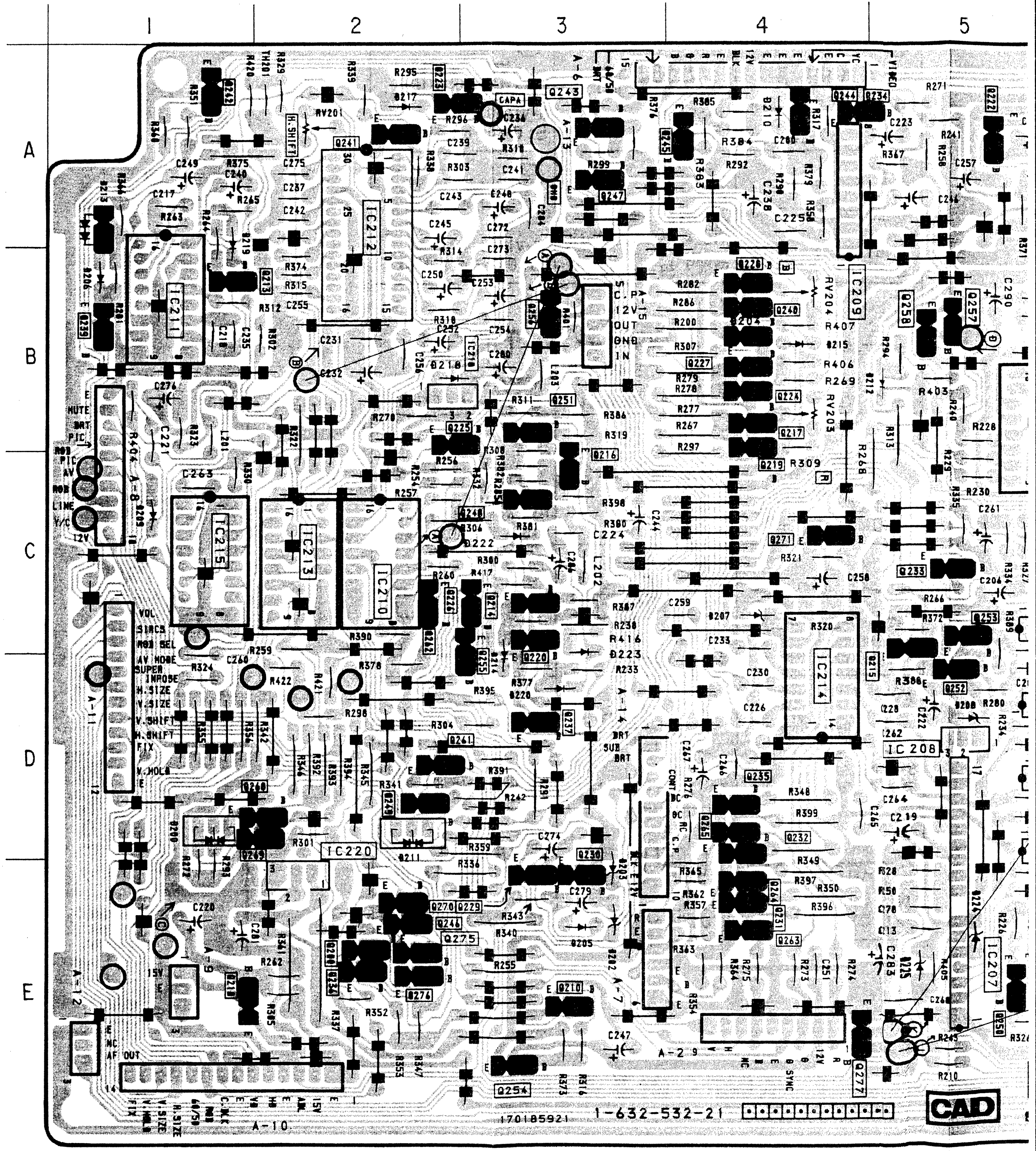
Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q210	B	0	0	0	0	0	9.4
	C	12.1	11.9	11.9	11.9	11.9	0
	E						
Q212	B	7.1	6.9	7.0	6.9	6.9	7.0
	C	12.0	12.0	11.7	11.7	11.7	11.7
	E	6.5	6.3	6.3	6.3	6.3	6.3
Q213	B	1.6	1.6	1.6	1.6	1.6	2.0
	C	0.4	0.4	0.4	4.2	4.2	3.9
	E	2.2	2.2	2.2	2.2	2.2	2.5
Q214	B	0	0	2.7	2.7	2.7	2.5
	C						
	E	4.2	4.0	4.0	4.0	4.0	1.9
Q216	B	4.0	4.0	4.0	4.0	4.0	3.5
	C	8.6	8.4	8.4	8.4	8.4	2.8
	E	3.4	3.4	3.4	3.4	3.4	3.5
Q217	B	2.1	2.1	2.1	2.1	2.1	0
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q219	B	1.0	1.0	1.0	1.0	1.0	0.6
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q220	B	4.8	4.6	4.7	4.7	4.7	*
	C						
	E	4.2	4.0	4.0	4.0	4.0	1.9
Q223	B	3.2	3.2	3.2	3.2	3.2	0.3
	C						
	E	2.6	2.6	2.6	2.5	2.5	2.8
Q224	B	2.1	2.1	2.1	2.1	2.1	0
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q225	D	7.9	7.9	7.9	7.9	7.9	2.2
	G	7.9	7.9	7.9	7.9	7.9	0
	S	8.0	8.0	7.8	7.8	7.8	11.8
Q226	B	0	0	0	0	0	2.7
	C	7.9	7.7	7.7	7.7	7.7	0
	E						
Q227	B	1.0	1.0	1.0	1.0	1.0	0.6
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q228	B	2.1	2.1	2.1	2.1	2.1	0
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q229	B						
	C	3.8	3.8	5.5	5.5	5.5	3.3
	E	1.1	0.5	0.6	0.3	0.3	1.3
Q230	B						
	C	5.9	6.2	6.2	6.2	6.2	6.2
	E	0.4	0	-0.1	0	0	0
Q231	B	5.4	5.4	5.4	5.4	5.4	1.3
	C	11.6	11.6	11.6	11.6	11.6	11.7
	E	4.7	4.7	4.7	4.9	4.9	2.4
Q232	B	5.3	5.3	5.5	5.5	5.5	1.3
	C	11.8	11.6	11.6	11.6	11.6	11.8
	E	4.7	4.7	4.7	4.9	4.9	2.6
Q235	B	5.4	5.4	5.4	5.4	5.4	1.3
	C	11.8	11.6	11.6	11.6	11.6	11.8
	E	4.7	4.9	4.8	4.9	4.9	2.4
Q236	B	0.3	0.3	0.3	0.3	0.3	0.3
	C	3.8	5.5	5.5	5.5	5.5	3.3
	E	0	0	0	0	0	0
Q237	B	4.9	4.9	4.9	4.9	4.9	0.6
	C						
	E	4.8	4.6	4.7	4.7	4.7	*
Q239	B	0	0	0	0	0	6.7
	C	3.5	3.5	3.5	3.5	3.5	0
	E						
Q240	B	1.0	1.0	1.0	1.0	1.0	0.6
	C						
	E	2.0	2.0	2.0	2.0	2.0	0
Q241	B	1.5	0	1.4	1.4	1.4	0
	C	0	11.9	0	0	0	2.8
	E						
Q242	B	4.1	4.1	0	0	0	1.0
	C	0	0	3.4	3.4	3.4	0
	E						
Q244	B	0	0	0	0	0	0
	C	6.4	6.4	6.4	6.4	6.4	8.4
	E						
Q245	B	0.4	0.4	0.4	0.4	0.4	0.6
	C	2.7	2.7	2.7	2.7	2.7	0
	E						
Q246	B	0	0	0	0	0	0
	C	0	0	0	0	0	6.7
	E						
Q247	B	5.5	5.5	5.5	5.5	5.5	0
	C	0	0	0	0	0	11.9
	E						
Q248	B	11.8	11.5	11.5	11.5	11.5	11.2
	C	4.6	4.6	4.6	4.6	4.6	11.2
	E						
Q249	B	0.7	0.2	0.5	0.4	0.4	9.0
	C						
	E	0	0	0	0	0	8.3
Q250	B	11.7	11.4	11.4	11.4	11.4	11.4
	C	0	0	0	0	0	0
	E	12.2	11.9	11.9	11.9	11.9	11.9
Q251	B	8.6	8.4	8.4	8.4	8.4	2.8
	C						
	E	8.0	7.8	7.8	7.8	7.8	2.2
Q255	B	0	0	0	0	0	0
	C	0	0	0	0	0	2.7
	E						
Q256	B	7.2	7.2	7.2	7.2	7.2	6.4
	C						
	E	6.6	6.6	6.6	6.6	6.6	6.4
Q262	B	0	0	0	0	0	8.3
	C	12.2	11.9	11.9	11.9	11.9	0
	E						
Q263	B	0	0	0	0	0	3.5
	C	11.8	11.6	11.6	11.6	11.6	11.6
	E	4.7	4.7	4.7	4.9	4.9	2.4
Q264	B	0	0	0	0	0	3.5
	C	11.8	11.6	11.6	11.6	11.6	11.8
	E	4.7	4.7	4.7	4.9	4.9	2.7
Q265	B	0	0	0	0	0	3.4
	C	11.8	11.6	11.6	11.6	11.6	11.8
	E	4.7	4.9	4.8	4.9	4.9	2.4
Q268	B	4.7	7.0	7.0	7.0	7.0	0
	C						
	E	5.3	7.5	7.5	7.5	7.5	0.6
Q269	B	0	0	0	0	0	4.1
	C						
	E	0	0	0.6	0.6	0.6	4.7
Q270	B	0	0	0	0	0	6.7
	C	4.7	7.0	7.0	7.0	7.0	0
	E						
Q271	B	0	0	0	0	0	9.3
	C	5.5	5.5	5.5	5.5	5.5	0
	E						
Q274	B	0	0	0	0	0	0
	C	12.2	11.9	11.9	11.9	11.9	11.9
	E	0	0	0	0	0	0
Q275	B	0	0	0	0	0	6.7
	C	10.1	9.9	9.9	9.9	9.9	0
	E						
Q276	B	10.1	9.9	9.9	9.9	9.9	0
	C	0	0	0	0	0	4.1
	E						

ABOARD

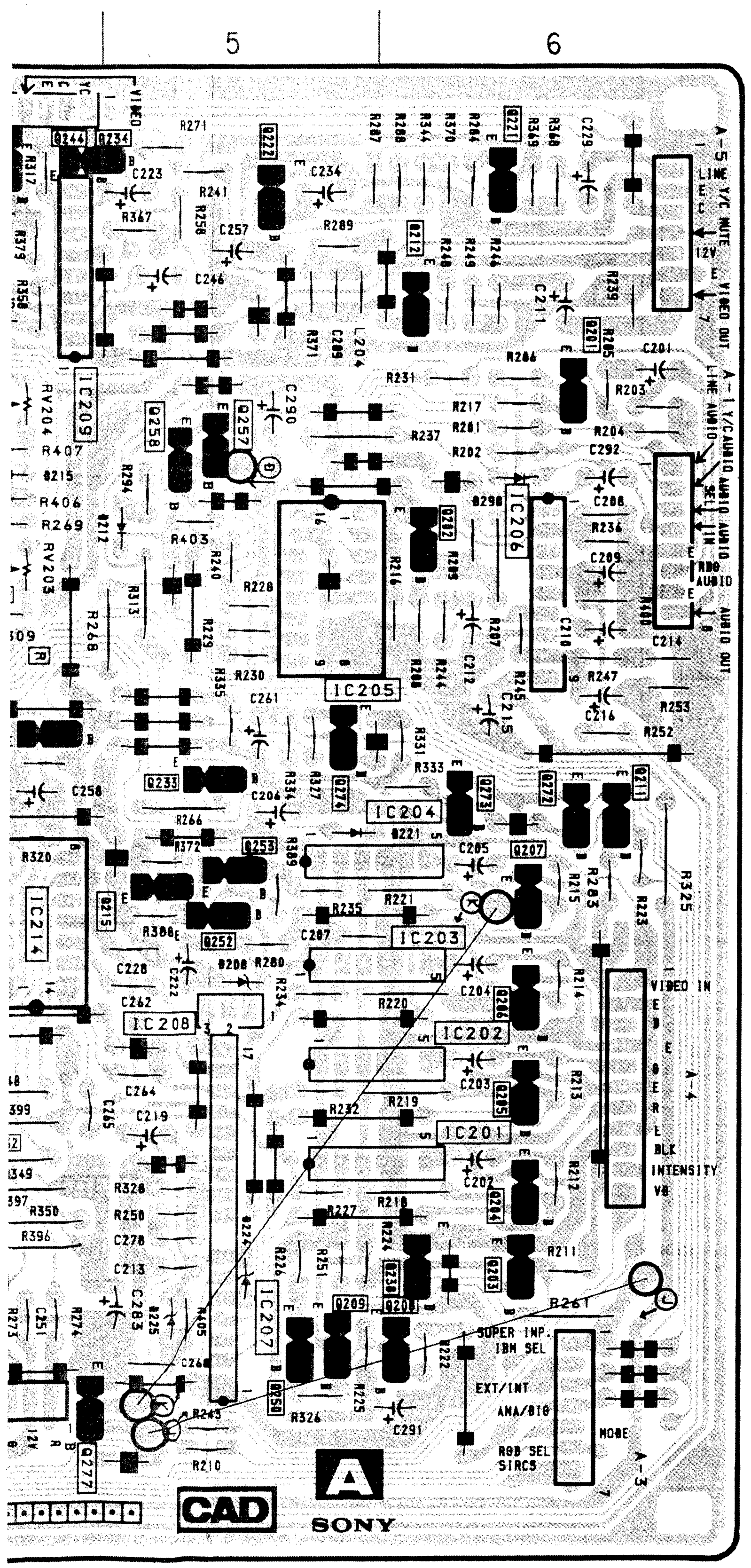
IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC205	①	5.0	5.0	5.0	5.0	4.0	5.0
	②	4.9	4.9	4.9	4.8	5.0	5.0
	③	5.0	5.0	4.8	4.9	4.9	4.8
	⑤	4.9	4.9	4.9	4.8	4.8	5.0
	⑨	0	0	0	0	-0	9.3
	⑩	0	0	0	0	9.1	0
	⑮	4.9	4.9	4.9	4.8	4.8	5.0
IC209	④	7.3	7.1	7.0	7.1	7.1	7.0
	⑦	7.9	7.7	7.7	7.8	7.8	7.8
IC210	①	3.8	0.5	2.8	1.8	1.9	1.9
	②	0	0	0	0	0	5.0
	④	4.6	4.6	4.6	4.6	4.6	4.5
	⑥	12.2	12.2	11.9	11.9	11.9	0
	⑫	0	0	-0.2	0	0	3.6
	⑭	4.1	3.9	3.3	*	*	5.0
	⑮	*	*	*	*	*	5.0
IC211	②	3.7	3.7	3.7	3.6	3.6	3.3
	⑥	4.3	4.3	4.3	4.2	4.2	3.9
	⑦	0.4	0.4	0.4	0.3	0.3	0.2
	⑫	3.7	3.7	3.7	3.6	3.6	3.3
	⑭	5.0	4.8	4.8	4.9	4.9	4.9
IC212	①	2.6	2.6	2.6	2.5	2.5	2.8
	②	2.5	2.5	2.5	2.5	2.5	2.8
	③	2.6	2.6	2.6	2.5	2.5	2.8
	④	7.7	7.7	7.5	7.5	7.5	7.6
	⑤	5.7	5.7	5.7	5.7	5.7	4.0
	⑥	5.7	5.7	5.7	5.7	5.7	4.0
	⑦	0.8	0.8	0.8	0.8	0.8	0
	⑩	6.0	6.0	6.0	6.0	6.0	6.1
	⑫	6.0	6.0	6.0	6.0	6.0	2.9
	⑬	7.9	7.7	7.7	7.7	7.7	7.7
	⑮	7.9	7.7	7.8	7.8	7.8	7.8
	㉔	4.3	4.3	4.1	4.1	4.1	4.1
	㉘	8.0	7.8	7.8	7.9	7.9	7.9
IC213	①	8.0	8.0	7.8	7.8	7.8	11.8
	④	1.5	1.5	1.5	1.5	1.5	1.9
	⑤	0	0	0	0	0	1.9
	⑨	12.2	12.2	11.9	11.9	11.9	0
	⑩	12.2	12.2	11.9	11.9	11.9	0
	⑪	0	0	0	0	0	0.5
	⑮	8.0	8.0	7.8	7.8	7.8	4.2
IC214	③	5.3	5.3	5.3	5.5	5.5	0.1
	④	5.4	5.4	5.4	5.4	5.4	0.1
	⑤	0	0	0	0	0	0.1
	⑥	5.5	5.5	5.5	5.5	5.5	0
	⑦	0	0	0	0	0	0
	⑧	5.4	5.4	5.4	5.4	5.4	1.3
	⑨	5.3	5.3	5.3	5.5	5.5	1.3
	⑩	4.7	4.7	4.7	4.7	4.7	0.1
	⑫	4.7	4.7	4.7	4.7	4.7	0.1
	⑬	4.7	4.7	4.7	4.7	4.7	0.1
	⑭	4.7	4.7	4.7	4.7	4.7	0.1
IC215	④	4.4	4.4	4.4	4.3	4.3	4.2
	⑦	1.8	1.8	1.6	1.6	1.6	1.6

A VIDEO PROCESS, SYNC PROCESS, AUDIO PROCESS

—A Board—



[DEFECTION H CONTROL] **D3** [SYNC SIGNAL AMP] **AB** **A** **AB** **D3**

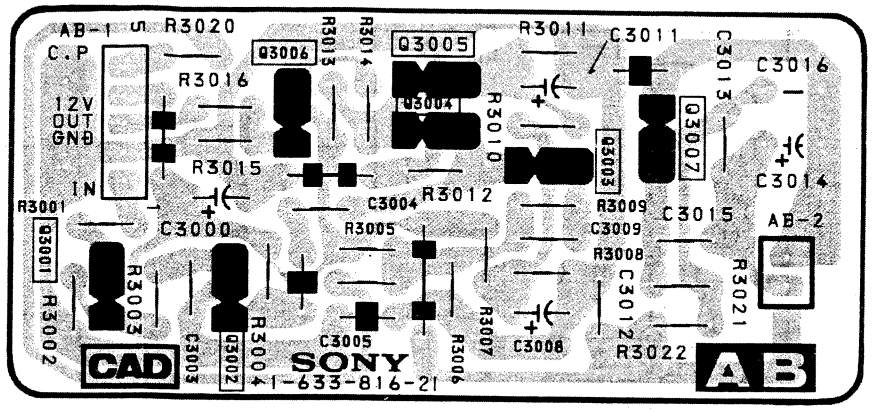

5
6
IC201
IC202
IC203
IC204
IC205
IC206
IC207
IC208
IC209
IC214
VIDEO IN
LINE AUDIO
AUDIO OUT
VIDEO OUT
BLK INTENSITY
SUPER INP. IBM SEL
EXT/INT
ANA/B10
RGB SEL SIRCS
MODE
A-5
A-4
A-3
A
CAD
SONY

IC	
IC201	D-6
IC202	D-6
IC203	D-6
IC204	C-6
IC205	B-5
IC206	B-6
IC207	E-5
IC208	D-5
IC209	A-4
IC210	C-2
IC211	B-1
IC212	A-2
IC213	C-2
IC214	D-4
IC215	C-1
IC218	B-2
IC220	E-2

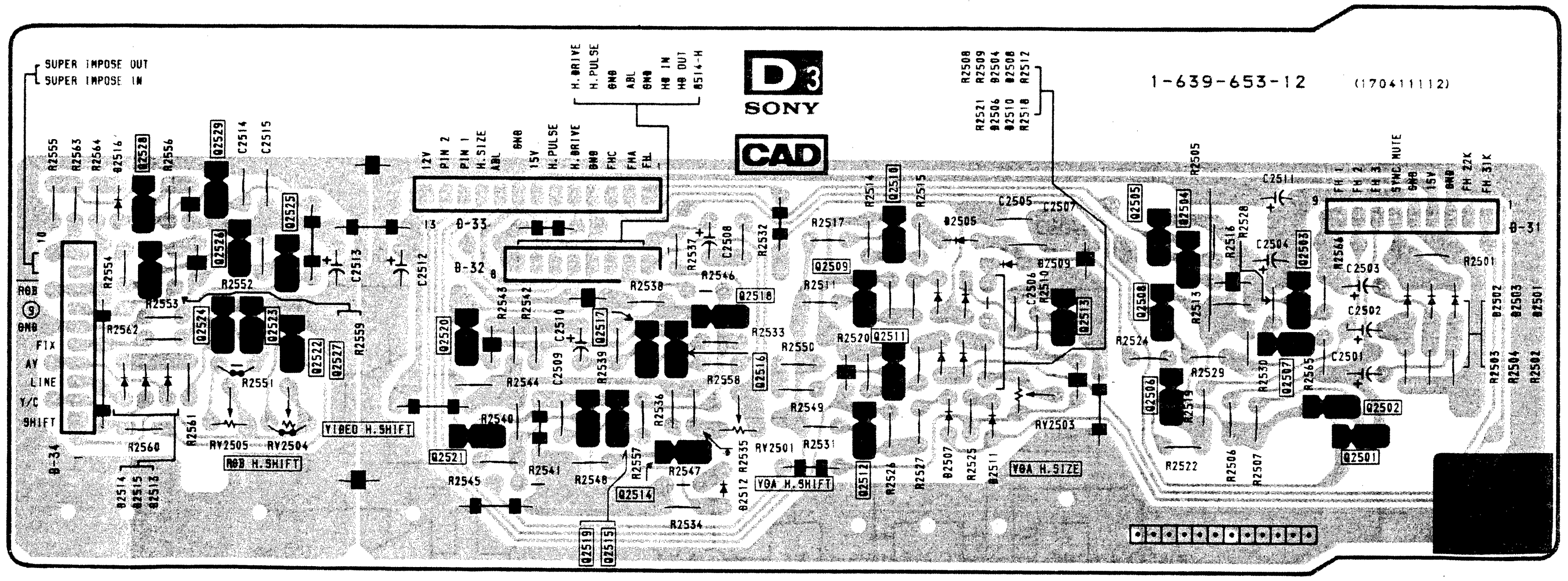
TRANSISTOR	
Q200	E-2
Q201	B-6
Q202	B-6
Q203	E-6
Q204	E-6
Q205	D-6
Q206	D-6
Q207	C-6
Q208	E-6
Q209	E-5
Q210	E-3
Q211	C-6
Q212	A-6
Q213	B-1
Q214	C-3
Q215	C-5
Q216	C-3
Q217	B-4
Q218	E-1
Q219	B-4
Q220	C-3
Q221	A-6
Q222	A-5
Q223	A-2
Q224	B-4
Q225	B-2
Q226	C-3
Q227	B-4
Q228	B-4
Q229	E-3
Q230	E-3
Q231	E-4
Q232	D-4
Q233	C-5
Q234	A-4
Q235	D-4
Q236	E-2
Q237	D-3
Q238	E-6
Q239	B-1
Q240	B-4
Q241	A-2
Q242	A-1
Q243	A-3
Q244	A-4
Q245	A-4
Q246	E-2
Q247	A-3
Q248	C-3
Q249	D-2
Q250	E-5
Q251	B-3
Q252	D-5
Q253	C-5
Q254	E-3
Q255	C-3
Q256	B-3
Q261	D-2
Q262	C-2
Q263	E-4
Q264	E-4
Q265	D-4
Q268	D-1
Q269	D-1
Q270	E-2
Q271	C-4
Q272	C-6
Q273	C-6
Q274	C-5
Q275	E-2
Q276	E-2

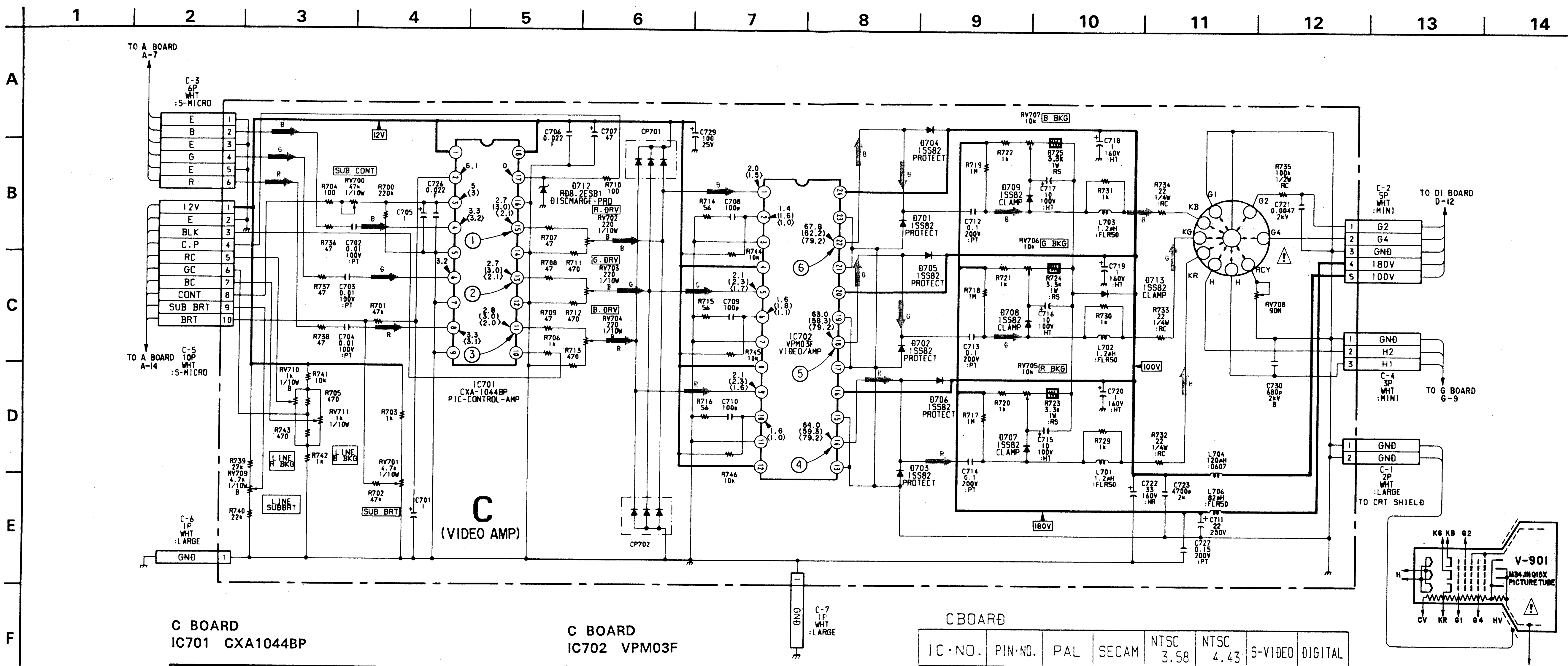
DIODE	
D200	D-1
D202	E-3
D203	E-3
D204	B-4
D205	E-3
D206	B-1
D207	C-4
D208	D-5
D209	C-1
D210	A-4
D211	D-2
D212	B-5
D214	D-3
D215	B-4
D217	A-2
D218	B-2
D219	A-1
D220	D-3
D221	C-5
D222	C-3
D223	C-3
D224	E-5
D225	E-5
D298	B-6

-AB Board-

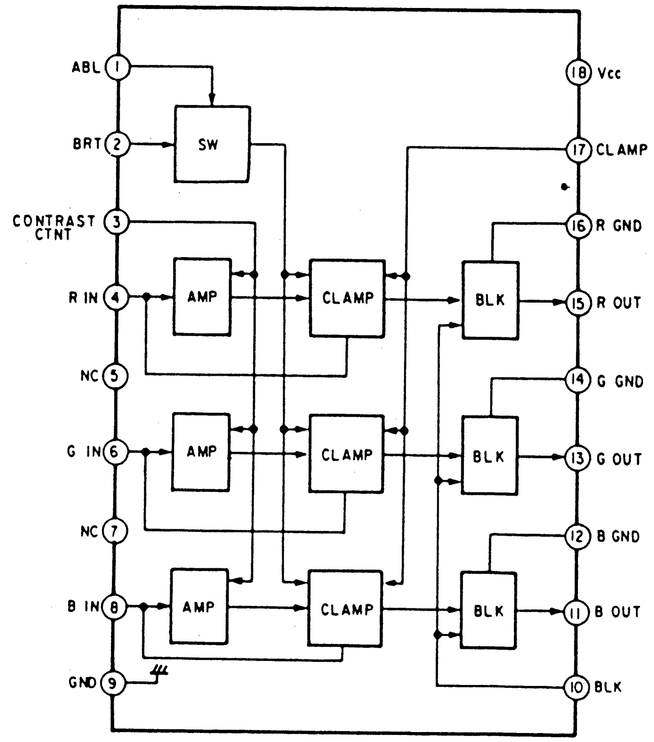

AB-1
C.P
12V
OUT
GND
IN
R3020
R3016
R3015
Q3006
Q3005
Q3004
R3011
C3011
C3016
C3014
C3015
AB-2
Q3003
Q3007
R3012
C3000
C3004
R3005
R3009
C3009
R3008
Q3001
R3001
R3002
R3003
C3003
Q3002
R3004
C3005
R3006
R3007
C3006
C3012
R3021
R3022
CAD
SONY
1-633-816-21
AB

-D3 Board-

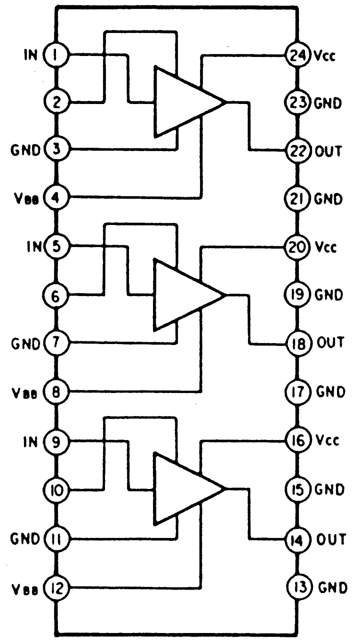

SUPER IMPOSE OUT
SUPER IMPOSE IN
H.DRIVE
H.PULSE
D3
SONY
CAD
1-639-653-12
(170411112)
RGB
GND
FIX
AY
LINE
Y/C
SHIFT
B-34
B-33
B-32
B-31
Q2528
Q2529
Q2525
Q2524
Q2523
Q2520
Q2517
Q2518
Q2516
Q2509
Q2510
Q2511
Q2512
Q2513
Q2514
Q2519
Q2515
Q2521
Q2522
Q2505
Q2504
Q2503
Q2508
Q2506
Q2507
Q2502
Q2501
RV2505
RV2504
RV2501
RV2503
VIDEO H.SHIFT
RGB H.SHIFT
YDA H.SHIFT
YDA H.SIZE


TO A BOARD A-7
C-3 6P WHT :S-MICRO
E
B
E
G
E
R
12V
E
BLK
C.P
RC
GC
BC
CONT
SUB BRT
BRT
TO A BOARD A-14
C-5 10P WHT :S-MICRO
C-6 1P WHT :LARGE
GND
SUB CONT
IC701 CXA-1044BP PIC-CONTROL-AMP
D712 RD8.2ESB1 DISCHARGE-PRO
R.DRV
G.DRV
B.DRV
LINE R BKG
LINE B BKG
LINE SUBBRT
SUB BRT
C
(VIDEO AMP)
CP701
CP702
IC702 VPM03F VIDEO/AMP
D704 1SS82 PROTECT
D701 1SS82 PROTECT
D705 1SS82 PROTECT
D702 1SS82 PROTECT
D706 1SS82 PROTECT
D703 1SS82 PROTECT
D709 1SS82 CLAMP
D708 1SS82 CLAMP
D707 1SS82 CLAMP
D713 1SS82 CLAMP
RV707 10k B BKG
RV706 10k G BKG
RV705 10k R BKG
100V
180V
C-7 1P WHT :LARGE
C-2 5P WHT :MINI
TO D1 BOARD D-12
G2
G4
GND
180V
100V
GND
H2
H1
C-4 3P WHT :MINI
TO G BOARD G-9
GND
GND
C-1 2P WHT :LARGE
TO CRT SHIELD
V-901 M34JNQ15X PICTURE TUBE
KG KB G2
CV KR G1 G4 HV
TO HV

C BOARD
IC701 CXA1044BP

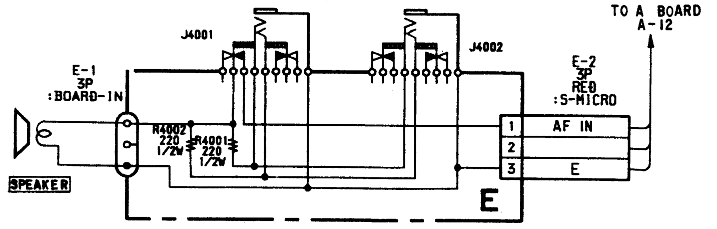

ABL
BRT
CONTRAST CTNT
R IN
NC
G IN
NC
B IN
GND
SW
AMP
AMP
AMP
CLAMP
CLAMP
CLAMP
BLK
BLK
BLK
Vcc
CLAMP
R GND
R OUT
G GND
G OUT
B GND
B OUT
BLK

C BOARD
IC702 VPM03F

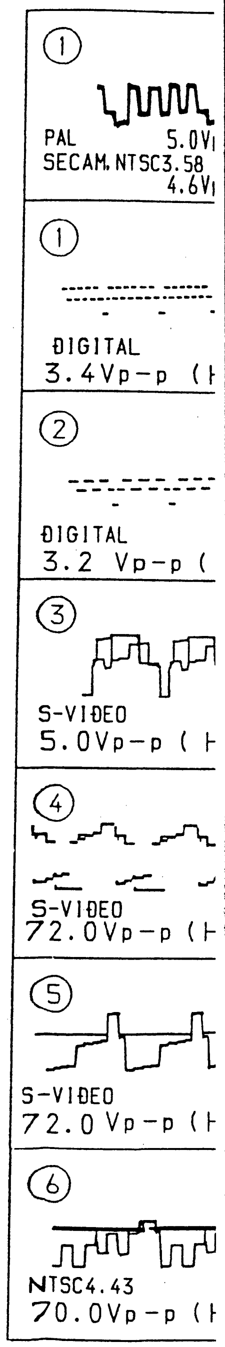

IN
GND
VBB
IN
GND
VBB
IN
GND
VBB
Vcc
GND
OUT
GND
Vcc
GND
OUT
GND
Vcc
GND
OUT
GND

CBOARD

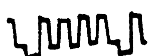
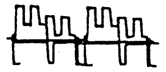
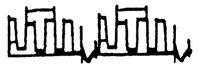
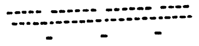
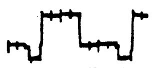
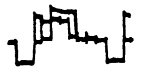
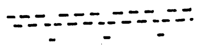
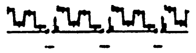
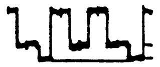
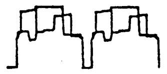
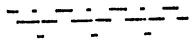
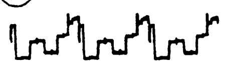
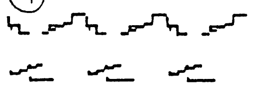
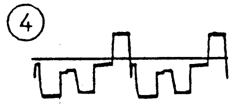
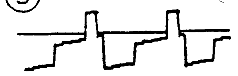
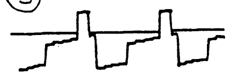
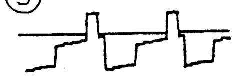
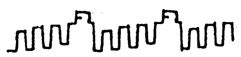
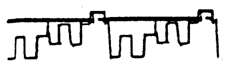
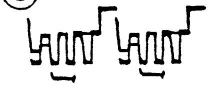
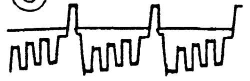
IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC701	③	5.0	5.0	5.0	5.0	5.0	3.0
	④	3.3	3.3	3.3	3.4	3.4	3.2
	⑧	3.2	3.3	3.3	3.4	3.4	3.1
	⑪	2.7	2.9	2.8	3.0	3.0	2.0
	⑬	2.7	2.7	2.7	3.0	3.0	2.1
	⑮	2.7	2.7	2.7	3.0	3.0	2.1
IC702	①	2.0	2.0	2.0	2.2	2.2	1.5
	②	1.4	1.4	1.4	1.6	1.6	1.0
	⑤	2.1	2.2	2.1	2.4	2.3	1.7
	⑥	1.6	1.6	1.6	1.8	1.8	1.1
	⑨	2.1	2.1	2.1	2.3	2.3	1.6
	⑩	1.5	1.6	1.6	1.8	1.7	1.0
	⑭	64.7	62.1	64.0	58.8	59.3	79.2
	⑱	63.7	61.1	63.0	57.7	58.3	79.2
	㉒	67.5	68.5	67.8	62.7	62.2	79.2


TO A BOARD A-12
J4001
J4002
E-1 3P :BOARD-IN
E-2 3P RED :S-MICRO
R4002 220 1/2W
R4001 220 1/2W
SPEAKER
AF IN
E
E

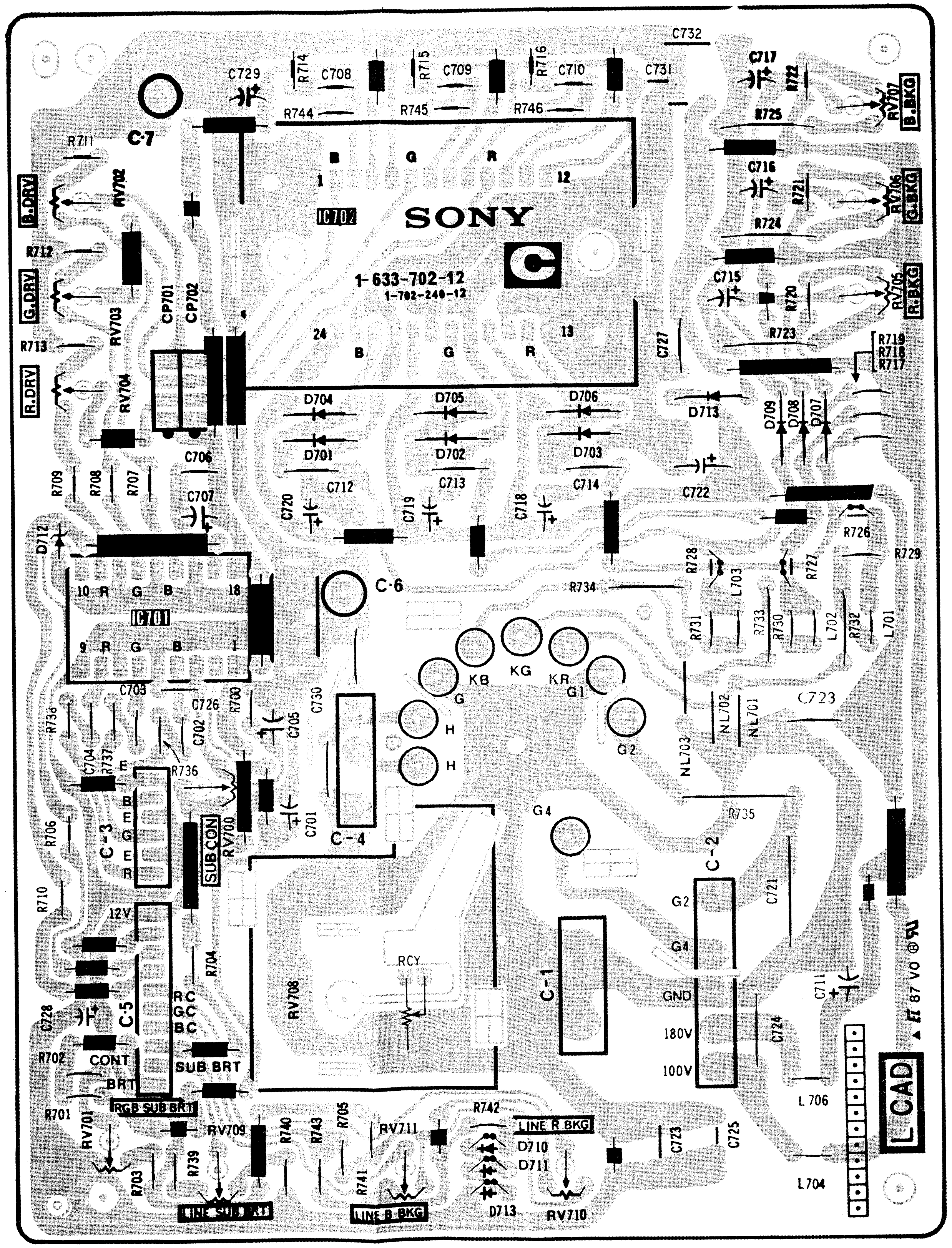
C BOARD WAV



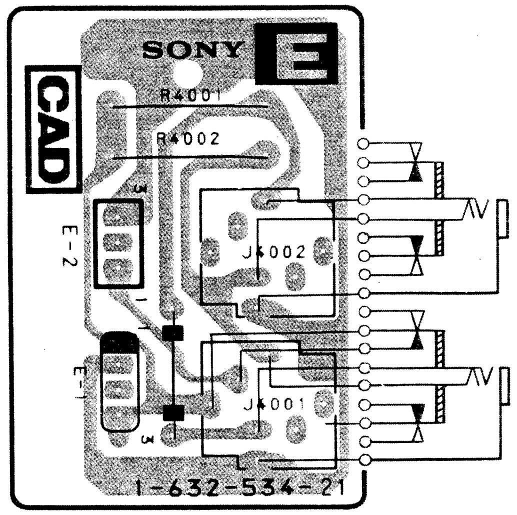
C BOARD WAVEFORMS

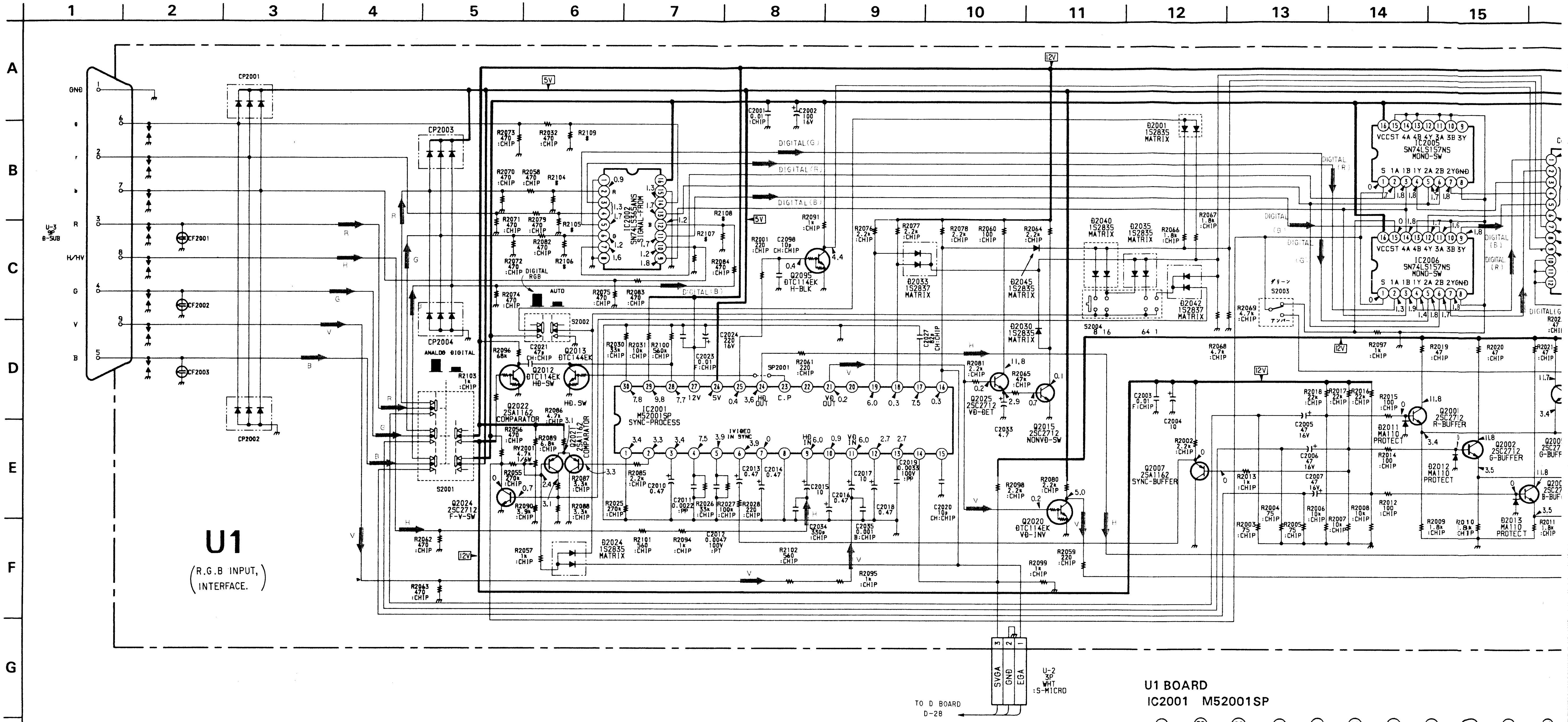
①  PAL 5.0Vp-p(H) SECAM, NTSC3.58 4.6Vp-p(H)	①  NTSC4.43 5.0Vp-p (H)	①  S-VIDEO 5.0Vp-p (H)
①  DIGITAL 3.4Vp-p (H)	②  PAL, NTSC4.43 5.0Vp-p(H) SECAM NTSC3.38 4.6Vp-p(H)	②  S-VIDEO 5.0Vp-p (H)
②  DIGITAL 3.2 Vp-p (H)	③  PAL 5.0Vp-p(H) SECAM NTSC3.38 4.6Vp-p(H)	③  NTSC4.43 5.0Vp-p (H)
③  S-VIDEO 5.0Vp-p (H)	③  DIGITAL 3.3Vp-p (H)	④  PAL, SECAM NTSC4.43 70.0Vp-p(H) NTSC3.38 68.0Vp-p(H)
④  S-VIDEO 72.0Vp-p (H)	④  DIGITAL 36.0 Vp-p (H)	⑤  PAL, SECAM NTSC3.38 NTSC4.43 70.0Vp-p(H)
⑤  S-VIDEO 72.0 Vp-p (H)	⑤  DIGITAL 36.0 Vp-p (H)	⑥  PAL, 70.0Vp-p(H) SECAM 65.0Vp-p(H) NTSC3.38 60.0Vp-p(H)
⑥  NTSC4.43 70.0Vp-p (H)	⑥  S-VIDEO 70.0Vp-p (H)	⑥  DIGITAL 34.0 Vp-p (H)

–C Board–

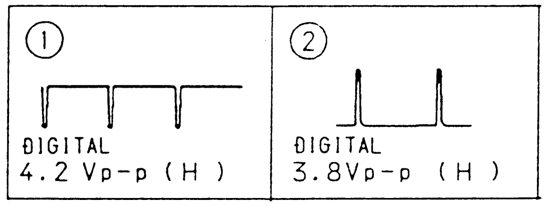

SONY
C
1-633-702-12
1-702-240-12
IC702
IC701
C-7
C-6
C-1
C-2
C-3
C-4
C-5
B.DRV
G.DRV
R.DRV
B.BKG
G.BKG
R.BKG
RV700
RV701
RV702
RV703
RV704
RV705
RV706
RV707
RV708
RV709
RV710
RV711
CP701
CP702
D701
D702
D703
D704
D705
D706
D707
D708
D709
D710
D711
D712
D713
KB
KG
KR
G1
G2
G4
H
SUB CON
12V
RC
GC
BC
CONT
BRT
SUB BRT
RGB SUB BRT
LINE SUB BRT
LINE B BKG
LINE R BKG
RCY
GND
180V
100V
L701
L702
L703
L704
L706
NL701
NL702
NL703
CAD
87 V0

–E Board–

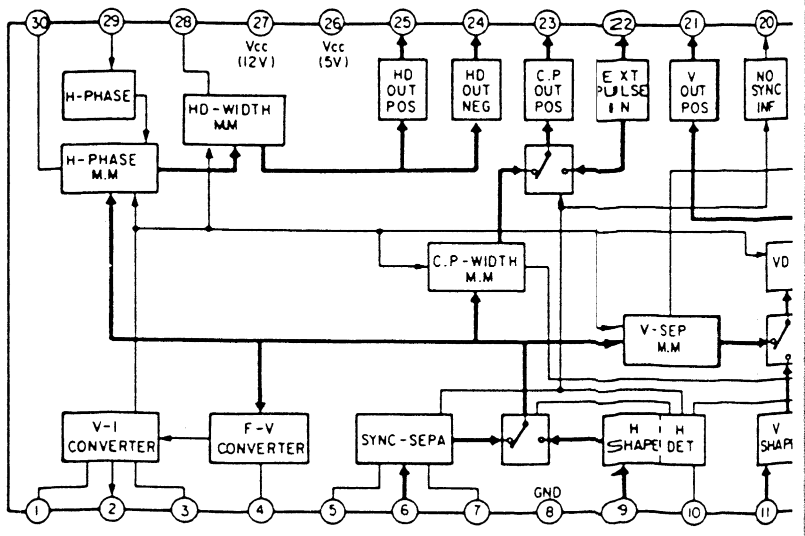

SONY
E
CAD
R4001
R4002
J4001
J4002
E-1
E-2
1-632-534-21

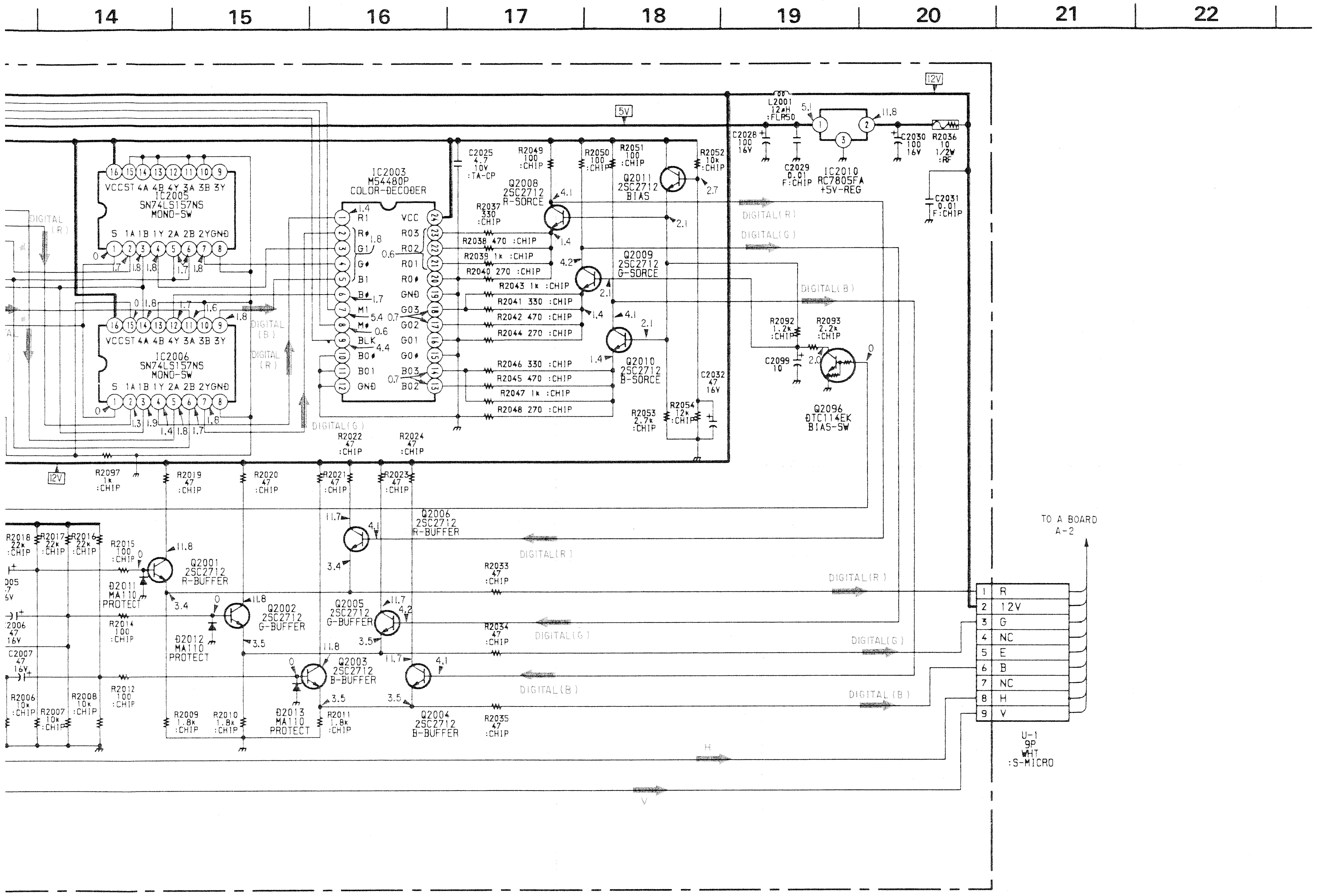

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
U1
(R.G.B INPUT, INTERFACE.)
U-3 9P D-SUB
CP2001
CP2002
CP2003
CP2004
CF2001
CF2002
CF2003
S2001
S2002
S2003
S2004
IC2002 SN74LS156NS SIGNAL-FROM
IC2001 M52001SP SYNC-PROCESS
IC2005 SN74LS157NS MONO-SW
IC2006 SN74LS157NS MONO-SW
Q2012 DTC114EK HD-SW
Q2013 DTC144EK HD.SW
Q2022 2SA1162 COMPARATOR
Q2021 2SA1162 COMPARATOR
Q2024 2SC2712 F-V-SW
Q2095 DTC114EK H-BLK
Q2025 2SC2712 VD-DET
Q2015 2SC2712 NONVD-SW
Q2020 DTC114EK VD-INV
Q2007 2SA1162 SYNC-BUFFER
Q2001 2SC2712 R-BUFFER
Q2002 2SC2712 G-BUFFER
D2011 MA110 PROTECT
D2012 MA110 PROTECT
D2013 MA110 PROTECT
D2001 1S2835 MATRIX
D2024 1S2835 MATRIX
D2033 1S2837 MATRIX
D2040 1S2835 MATRIX
D2035 1S2835 MATRIX
D2045 1S2835 MATRIX
D2042 1S2837 MATRIX
D2030 1S2835 MATRIX
DIGITAL(G)
DIGITAL(R)
DIGITAL(B)
ANALOG DIGITAL
DIGITAL RGB
AUTO
5V
12V
U-2 3P WHT :S-MICRO
SVGA
GND
EGA
TO D BOARD D-28

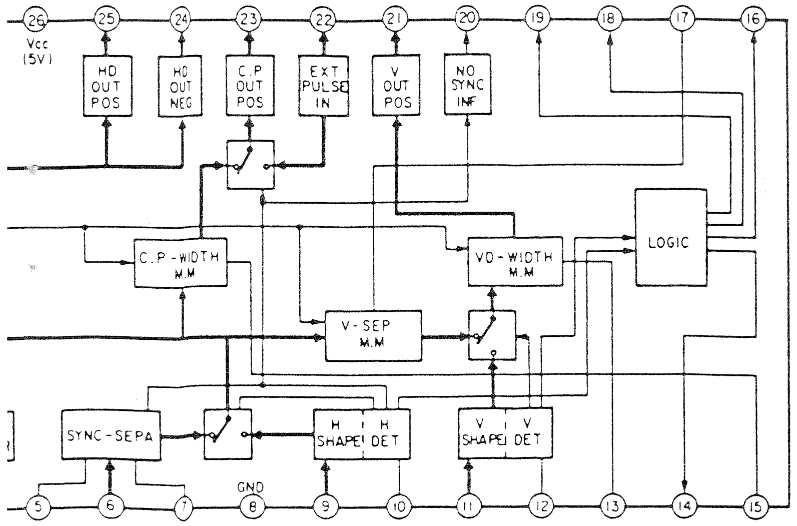
U1 BOARD WAVEFORMS


①
DIGITAL
4.2 Vp-p (H)
②
DIGITAL
3.8Vp-p (H)

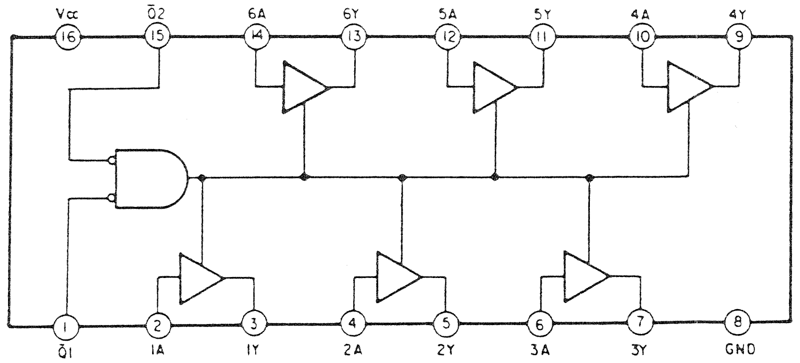
U1 BOARD
IC2001 M52001SP


H-PHASE
HD-WIDTH M.M
H-PHASE M.M
Vcc (12V)
Vcc (5V)
HD OUT POS
HD OUT NEG
C.P OUT POS
EXT PULSE IN
V OUT POS
NO SYNC INF
C.P-WIDTH M.M
V-SEP M.M
V-I CONVERTER
F-V CONVERTER
SYNC-SEPA
H SHAPE
H DET
V SHAPE
GND


14
15
16
17
18
19
20
21
22
12V
5V
L2001 12μH :FLR50
IC2010 RC7805FA +5V-REG
C2028 100 16V
C2029 0.01 F:CHIP
C2030 100 16V
R2036 10 1/2W :RF
C2031 0.01 F:CHIP
IC2005 SN74LS157NS MONO-SW
IC2006 SN74LS157NS MONO-SW
VCC ST 4A 4B 4Y 3A 3B 3Y
S 1A 1B 1Y 2A 2B 2Y GND
IC2003 M54480P COLOR-DECODER
VCC R03 R02 R01 R0 GND G03 G02 G01 G0 B03 B02 B01 B0 BLK GND
R1 R G1 G B1 B M1 M
C2025 4.7 10V :TA-CP
R2049 100 :CHIP
R2050 100 :CHIP
R2051 100 :CHIP
R2052 10k :CHIP
Q2008 2SC2712 R-SORCE
Q2011 2SC2712 BIAS
Q2009 2SC2712 G-SORCE
Q2010 2SC2712 B-SORCE
R2037 330 :CHIP
R2038 470 :CHIP
R2039 1k :CHIP
R2040 270 :CHIP
R2043 1k :CHIP
R2041 330 :CHIP
R2042 470 :CHIP
R2044 270 :CHIP
R2046 330 :CHIP
R2045 470 :CHIP
R2047 1k :CHIP
R2048 270 :CHIP
R2053 2.7k :CHIP
R2054 12k :CHIP
C2032 47 16V
R2092 1.2k :CHIP
R2093 2.2k :CHIP
C2099 10
Q2096 DTC114EK BIAS-SW
DIGITAL(R)
DIGITAL(G)
DIGITAL(B)
R2022 47 :CHIP
R2024 47 :CHIP
R2097 1k :CHIP
R2019 47 :CHIP
R2020 47 :CHIP
R2021 47 :CHIP
R2023 47 :CHIP
Q2006 2SC2712 R-BUFFER
Q2001 2SC2712 R-BUFFER
Q2002 2SC2712 G-BUFFER
Q2005 2SC2712 G-BUFFER
Q2003 2SC2712 B-BUFFER
Q2004 2SC2712 B-BUFFER
D2011 MA110 PROTECT
D2012 MA110 PROTECT
D2013 MA110 PROTECT
R2015 100 :CHIP
R2014 100 :CHIP
R2012 100 :CHIP
R2018 22k :CHIP
R2017 22k :CHIP
R2016 22k :CHIP
C2006 47 16V
C2007 47 16V
R2006 10k :CHIP
R2007 10k :CHIP
R2008 10k :CHIP
R2009 1.8k :CHIP
R2010 1.8k :CHIP
R2011 1.8k :CHIP
R2033 47 :CHIP
R2034 47 :CHIP
R2035 47 :CHIP
TO A BOARD A-2
1 R
2 12V
3 G
4 NC
5 E
6 B
7 NC
8 H
9 V
U-1 9P WHT :S-MICRO
H
V

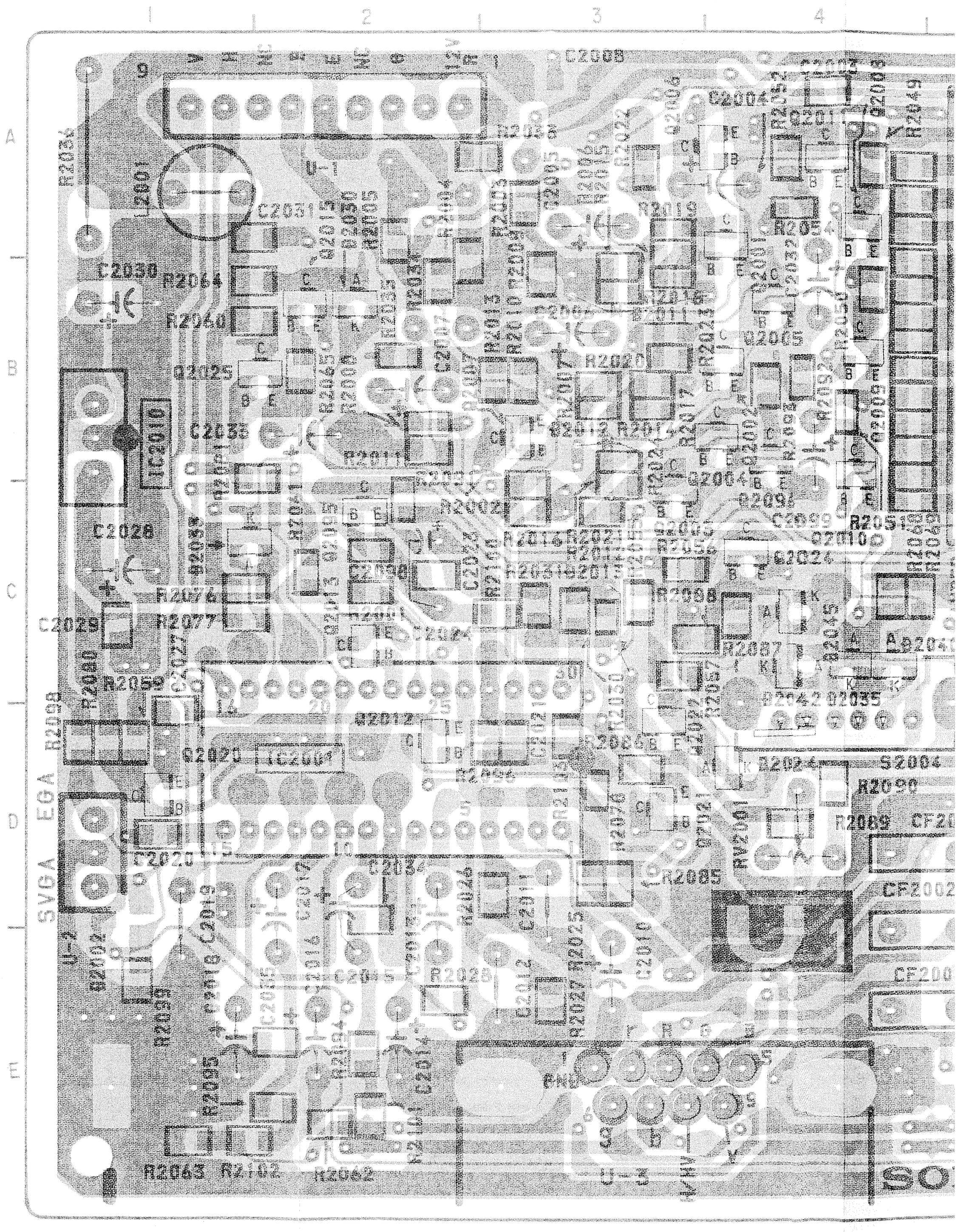

Vcc (5V)
HD OUT POS
HD OUT NEG
C.P OUT POS
EXT PULSE IN
V OUT POS
NO SYNC INF
LOGIC
C.P-WIDTH M.M
VD-WIDTH M.M
V-SEP M.M
SYNC-SEPA
H SHAPE H DET
V SHAPE V DET
GND
26 25 24 23 22 21 20 19 18 17 16
5 6 7 8 9 10 11 12 13 14 15

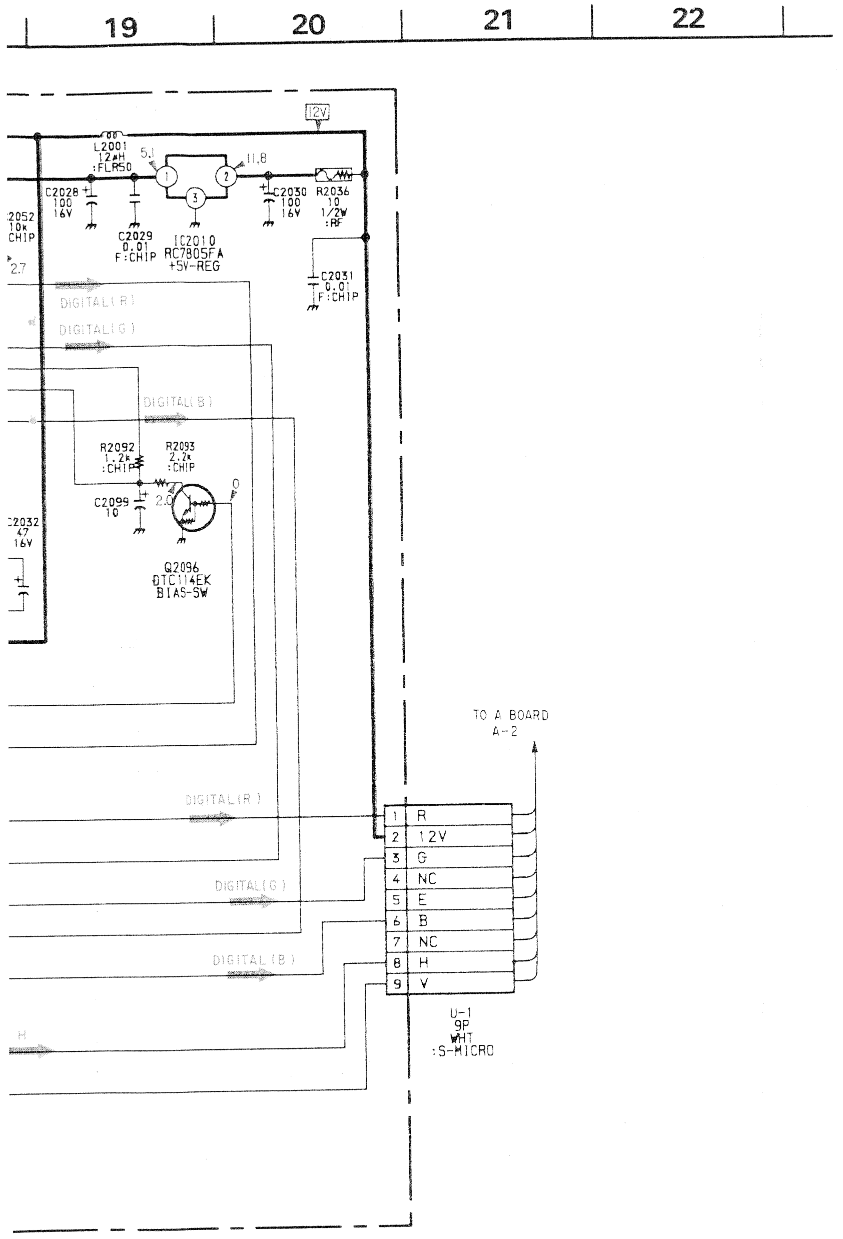
U1 BOARD
IC2002 SN74LS365ANS


Vcc
Q̄2
6A
6Y
5A
5Y
4A
4Y
16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
Q̄1
1A
1Y
2A
2Y
3A
3Y
GND

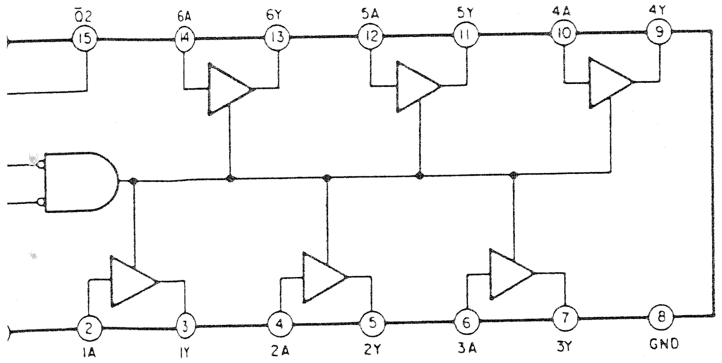
U1 [RGB INPUT, INTERFACE]

—U1 Board—


1
2
3
4
A
B
C
D
E
U-1
U-2
U-3
SVGA
EGA
L2001
C2030
C2028
C2029
IC2010
IC2001
Q2025
Q2020
R2036
R2064
R2060
R2080
R2059
R2098
R2099
R2095
R2063
R2102
R2062
RV2001
S2004
R2090
R2089
R2085
C2008
R2054
R2098

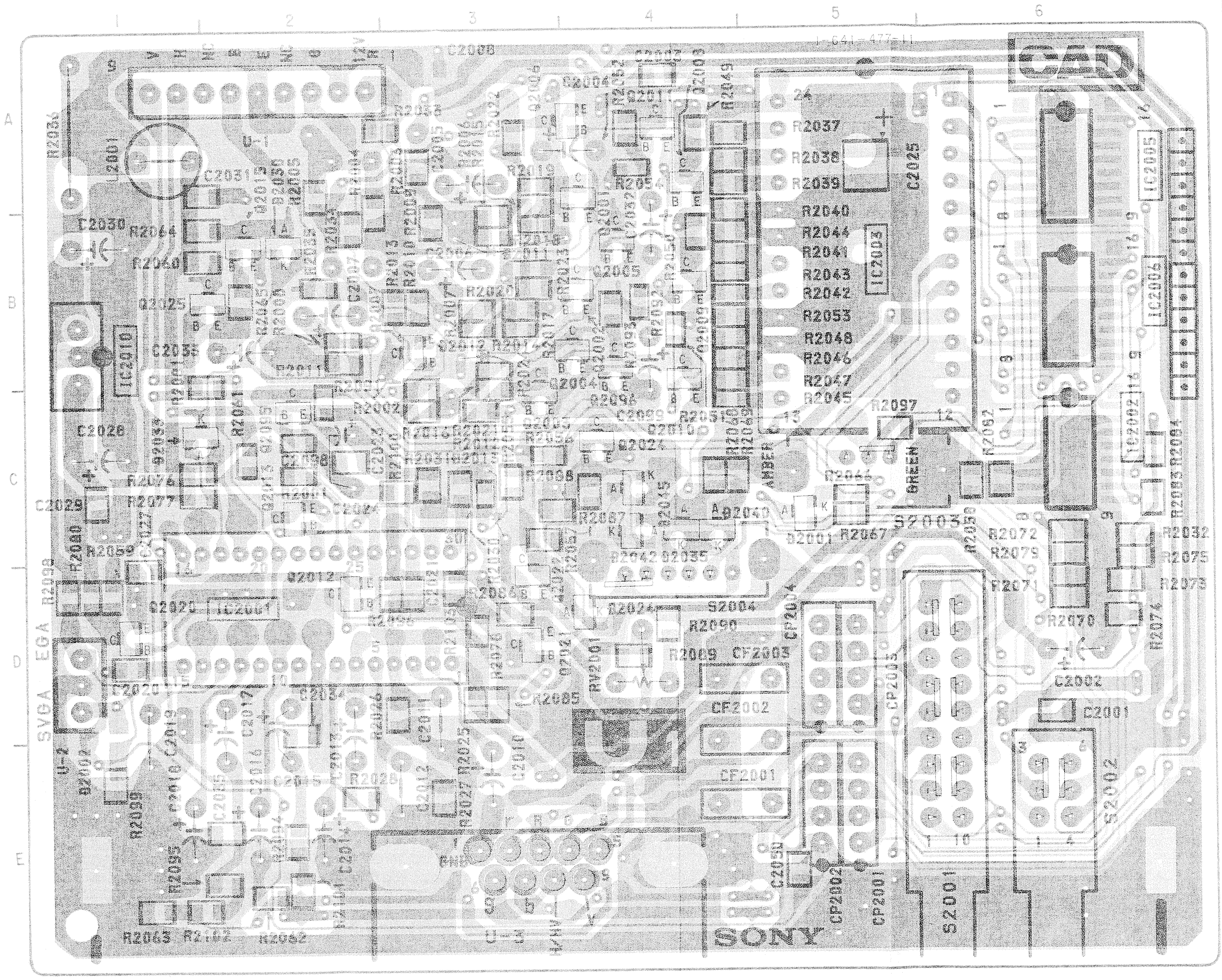

19
20
21
22
12V
L2001
12μH
:FLR50
IC2010
RC7805FA
+5V-REG
C2028
100
16V
C2029
0.01
F:CHIP
C2030
100
16V
R2036
10
1/2W
:RF
C2031
0.01
F:CHIP
DIGITAL(R)
DIGITAL(G)
DIGITAL(B)
R2092
1.2k
:CHIP
R2093
2.2k
:CHIP
C2099
10
Q2096
DTC114EK
BIAS-SW
TO A BOARD
A-2
R
12V
G
NC
E
B
NC
H
V
U-1
9P
WHT
:S-MICRO

ARD
2 SN74LS365ANS


G2
6A
6Y
5A
5Y
4A
4Y
15
14
13
12
11
10
9
2
3
4
5
6
7
8
1A
1Y
2A
2Y
3A
3Y
GND

U1 [RGB INPUT, INTERFACE]

—U1 Board—


1
2
3
4
5
6
A
B
C
D
E
U-1
U-2
U-3
SVGA
EGA
AMBER
GREEN
SONY
U1
IC2001
IC2002
IC2003
IC2005
IC2006
IC2010
S2001
S2002
S2003
S2004
RV2101
CF2001
CF2002
CF2003
CP2001
CP2002
CP2003
CP2004

Note :

- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.

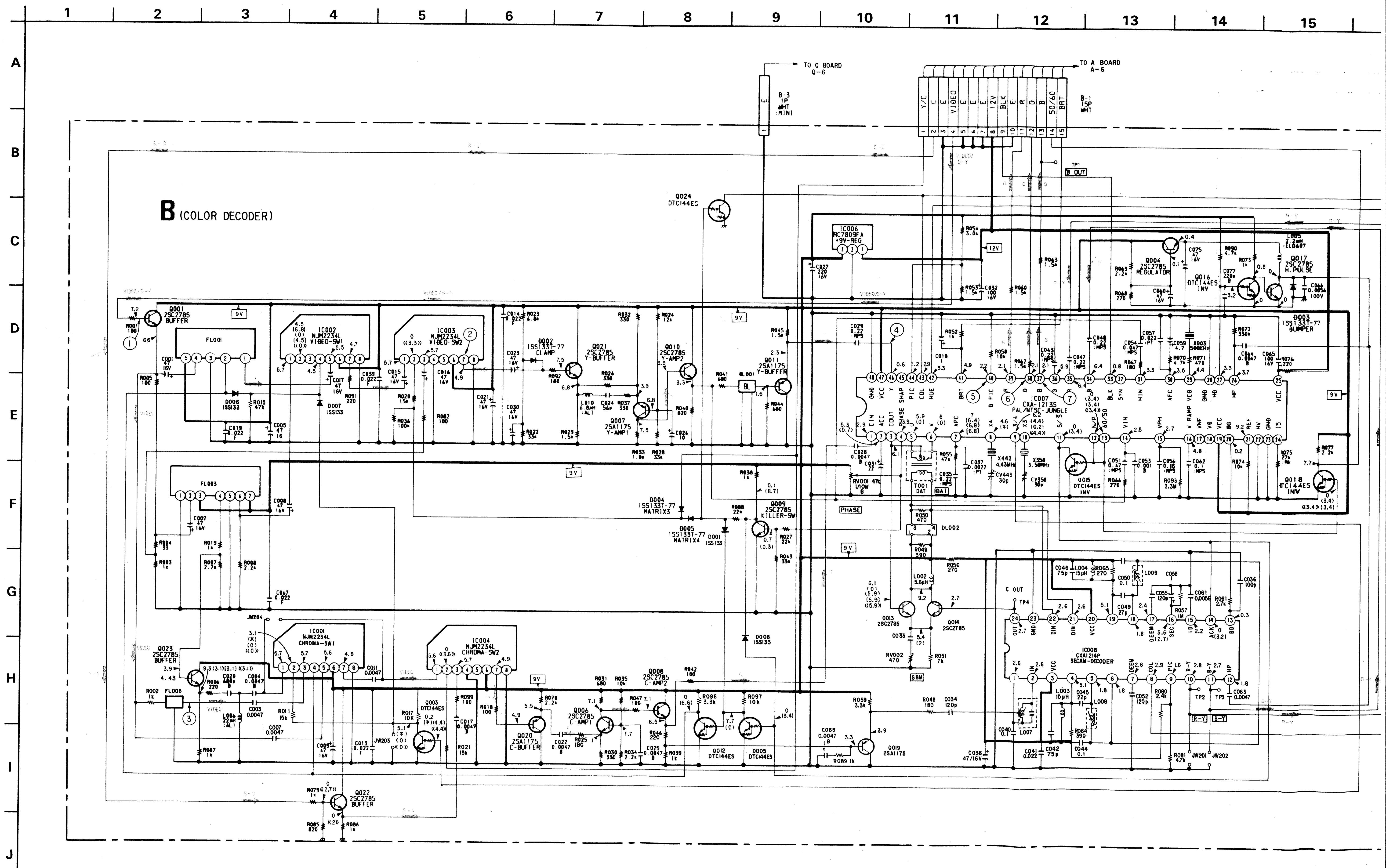
U1

IC	
IC2001	D－2
IC2002	C－6
IC2003	B－5
IC2005	A－6
IC2006	B－6
IC2010	B－1

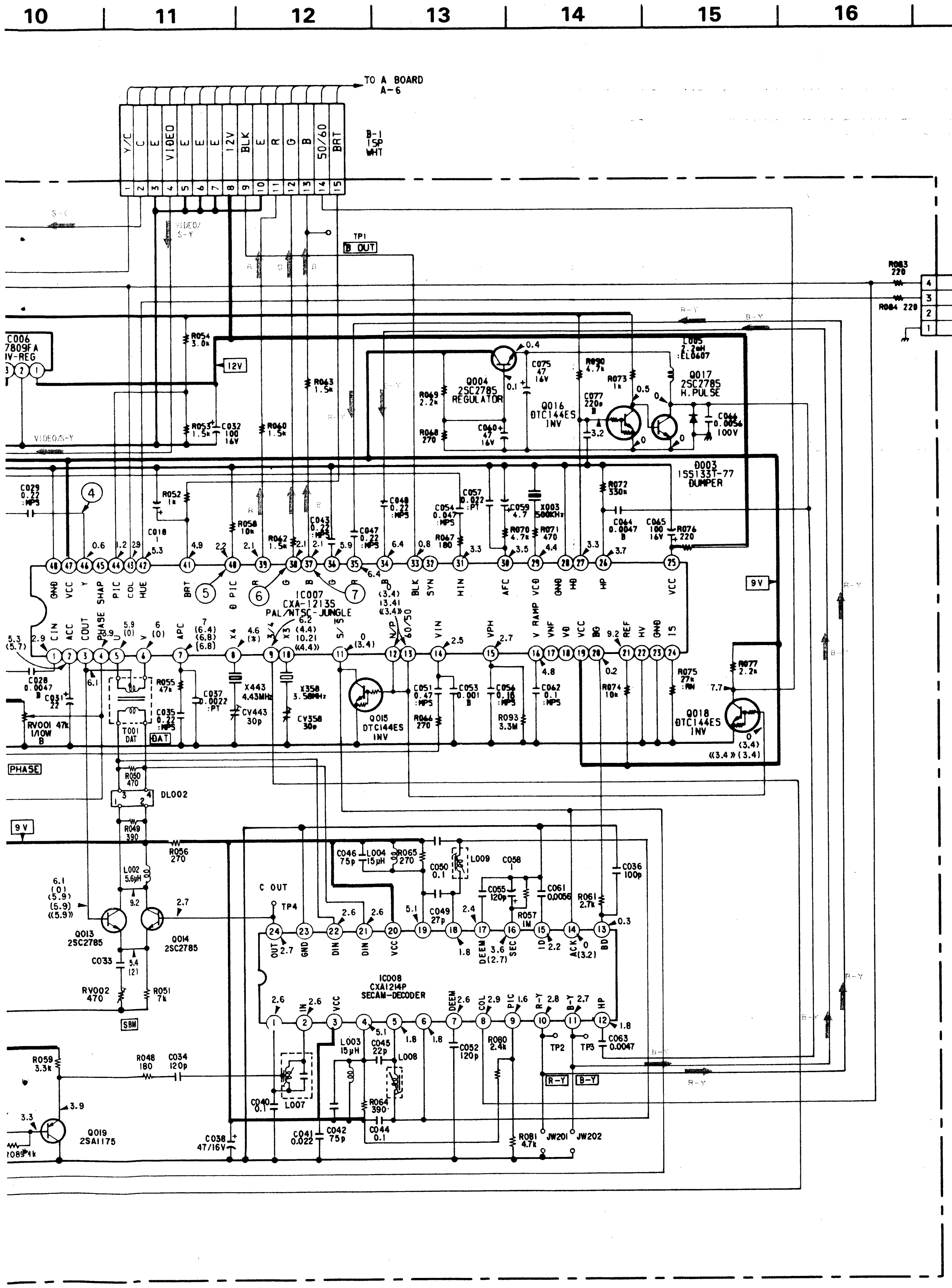
TRANSISTOR	
Q2001	A－4
Q2002	B－4
Q2003	C－3
Q2004	B－4
Q2005	B－4
Q2006	A－3
Q2007	B－3
Q2008	A－4
Q2009	B－4
Q2010	C－4
Q2011	A－4
Q2012	D－2
Q2015	B－2
Q2020	D－1
Q2021	D－3
Q2022	D－3
Q2024	C－4
Q2025	B－1
Q2095	C－2
Q2096	B－4

DIODE	
D2001	C－5
D2011	A－3
D2012	B－4
D2013	B－3
D2024	D－4
D2030	B－2
D2033	C－1
D2035	C－4
D2040	C－4
D2042	C－4
D2045	C－4

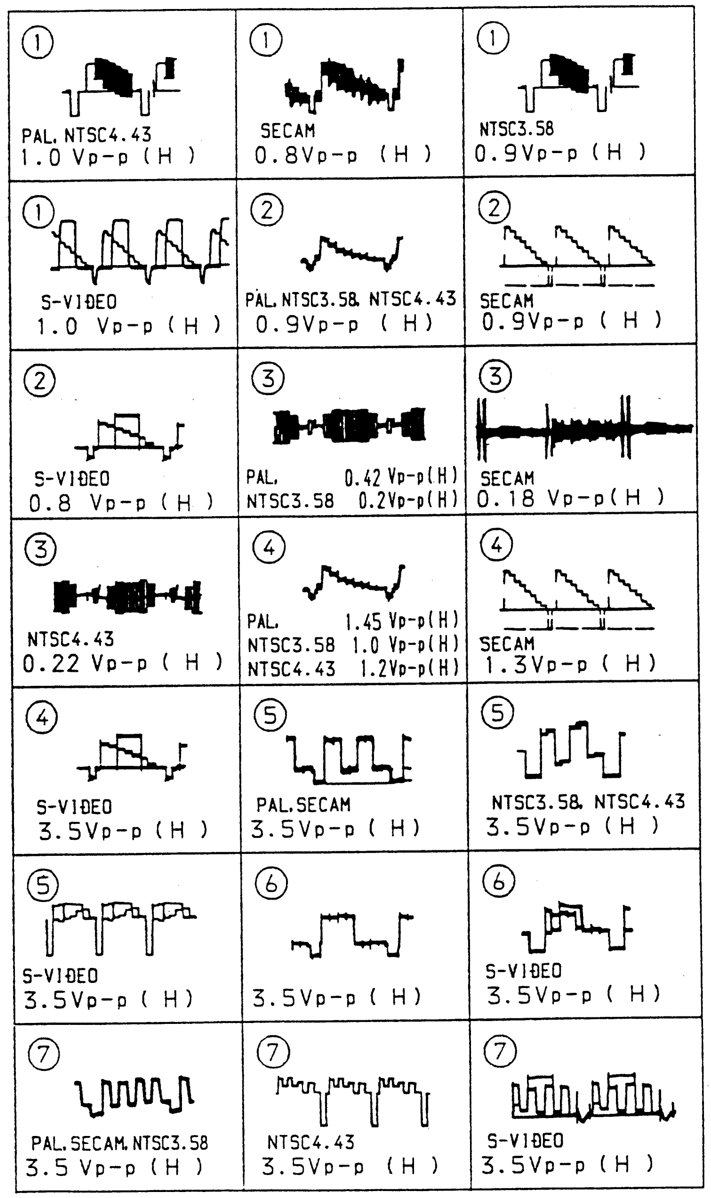
VARIABLE RESISTOR	
RV2101	D－4


B (COLOR DECODER)
TO Q BOARD Q-6
B-3 1P WHT :MINI
TO A BOARD A-6
B-1 15P WHT
Y/C
C
E
VIDEO
E
E
E
12V
BLK
E
R
G
B
50/60
BRT
Q001 2SC2785 BUFFER
FL001
IC002 NJM2234L VIDEO-SW1
IC003 NJM2234L VIDEO-SW2
D002 1SS133T-77 CLAMP
Q021 2SC2785 Y-BUFFER
Q010 2SC2785 Y-AMP2
Q007 2SA1175 Y-AMP1
Q011 2SA1175 Y-BUFFER
DL001
Q024 DTC144ES
IC006 RC7809FA +9V-REG
Q004 2SC2785 REGULATOR
Q016 DTC144ES INV
Q017 2SC2785 H.PULSE
D003 1SS133T-77 BUMPER
IC007 CXA-1213S PAL/NTSC-JUNGLE
Q015 DTC144ES INV
Q018 DTC144ES INV
X443 4.43MHz
X358 3.58MHz
X003 500KHz
T001 DAT
RV001 47k 1/10W
PHASE
DL002
FL003
D004 1SS133T-77 MATRIX3
D005 1SS133T-77 MATRIX4
D001 1SS133
Q009 2SC2785 KILLER-SW
D006 1SS133
D007 1SS133
D008 1SS133
Q013 2SC2785
Q014 2SC2785
RV002 470
SBM
C OUT
TP4
IC008 CXA1214P SECAM-DECODER
TP2
TP3
R-Y
B-Y
JW201
JW202
JW203
JW204
IC001 NJM2234L CHROMA-SW1
IC004 NJM2234L CHROMA-SW2
Q023 2SC2785 BUFFER
FL005
Q003 DTC144ES
Q020 2SA1175 C-BUFFER
Q006 2SC2785 C-AMP1
Q008 2SC2785 C-AMP2
Q012 DTC144ES
Q005 DTC144ES
Q019 2SA1175
Q022 2SC2785 BUFFER
9V
12V
TP1 B OUT
①
②
③
④
⑤
⑥
⑦
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J

[COLOR DECODER] B

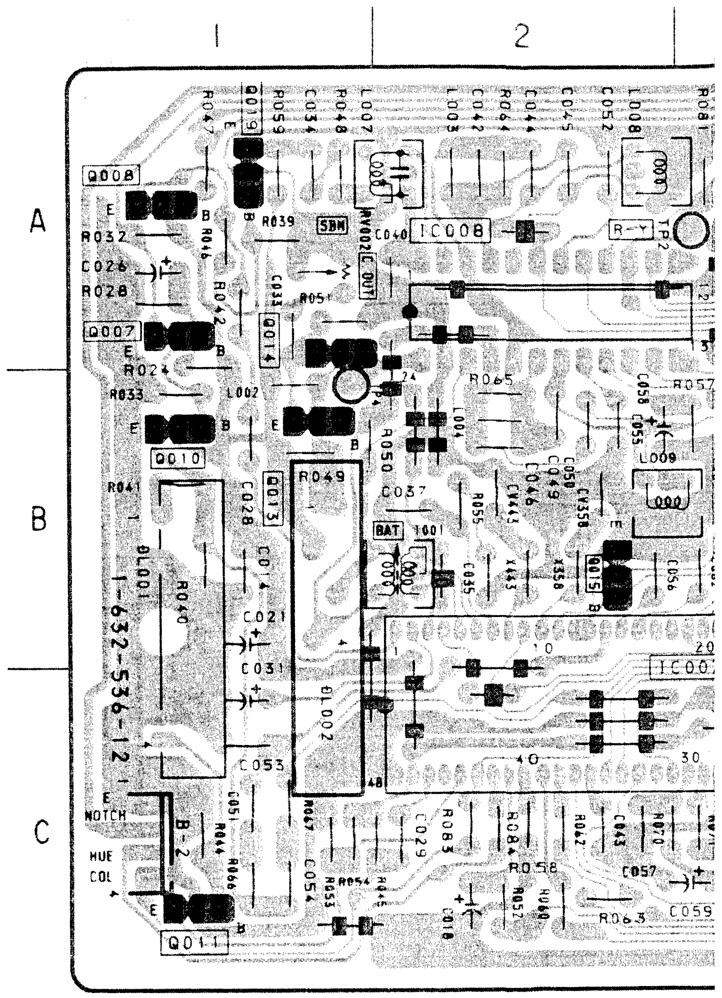

10
11
12
13
14
15
16
17
18
19
20
21
TO A BOARD A-6
Y/C
C
E
V.IDEO
E
E
E
12V
BLK
E
R
G
B
50/60
BRT
B-1 15P WHT
TP1
B OUT
B-2 4P YEL :S-MICRO
COL
HUE
NOTCH
E
R083 220
R084 220
TO H BOARD H-3
12V
9V
Q004 2SC2785 REGULATOR
Q016 DTC144ES INV
Q017 2SC2785 H.PULSE
D003 1SS133T-77 DUMPER
IC007 CXA-1213S PAL/NTSC-JUNGLE
X443 4.43MHz
X358 3.58MHz
Q015 DTC144ES INV
Q018 DTC144ES INV
PHASE
DL002
Q013 2SC2785
Q014 2SC2785
RV002 470
RV001 47k 1/10W B
SBM
DAT
IC008 CXA1214P SECAM-DECODER
C OUT
TP4
TP2
TP3
R-Y
B-Y
Q019 2SA1175
JW201
JW202

B BOARD WAVEFORMS

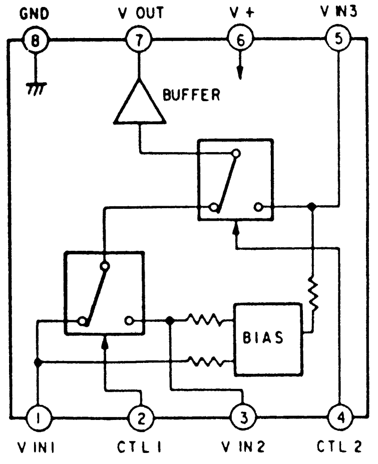


No mark : PAL
( ) : SECAM
〈 〉 : NTSC 3. 58
[ ] : NTSC 4. 43
《 》 : S-VIDEO
《《 》》 : DIGITAL

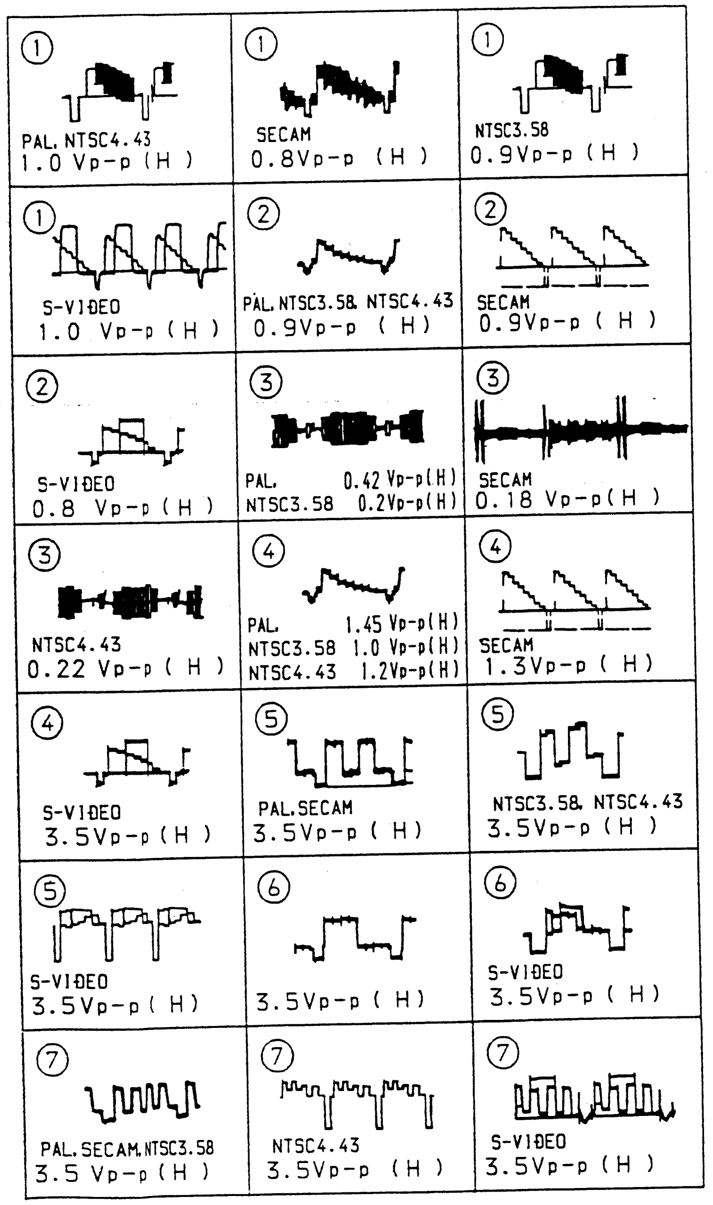
–B Board–


1
2
A
B
C
Q008
Q007
Q010
Q011
IC008
IC002
1-632-536-12
NOTCH
HUE
COL

B BOARD
IC002~IC004 NJM2234L

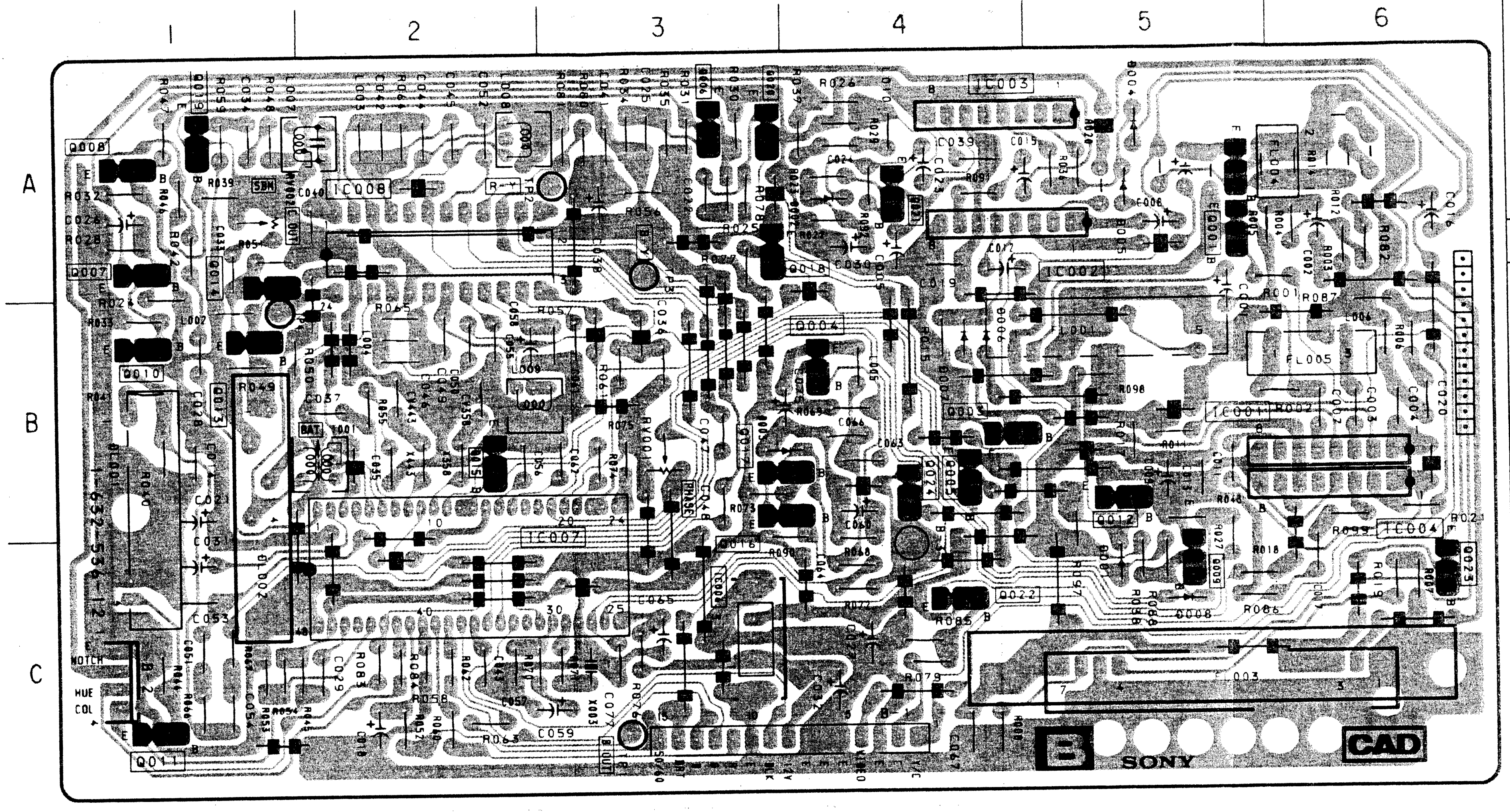

GND
V OUT
V+
V IN3
8
7
6
5
BUFFER
BIAS
1
2
3
4
V IN1
CTL1
V IN2
CTL2

B BOARD WAVEFORMS

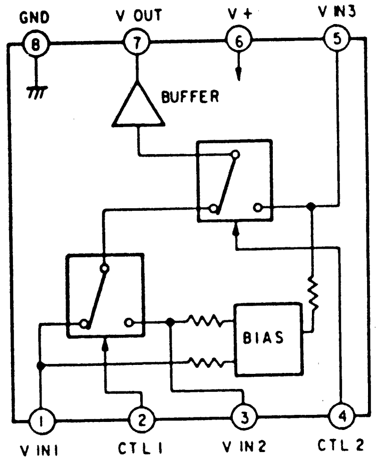


[COLOR DECODER] **B** **B**

–B Board–


1
2
3
4
5
6
A
B
C
IC001
IC002
IC003
IC004
IC007
IC008
R-Y
B-Y
TP1
TP2
TP3
TP4
NOTCH
HUE
COL
PHASE
FL001
FL004
FL005
RV001
RV002
SONY
CAD
1-632-536

B BOARD
IC002~IC004 NJM2234L


GND
V OUT
V+
V IN3
⑧
⑦
⑥
⑤
BUFFER
BIAS
①
②
③
④
V IN1
CTL 1
V IN2
CTL 2

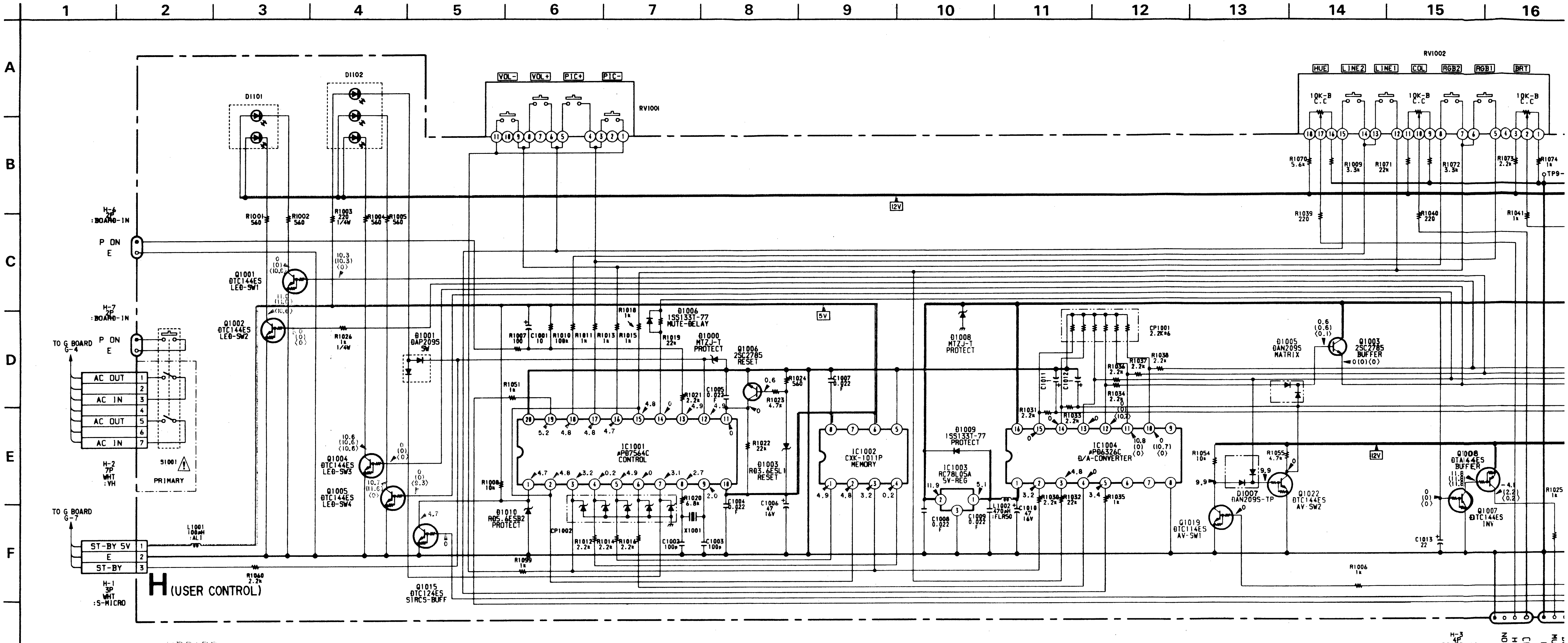
IC	
IC001	B-6
IC002	A-4
IC003	A-4
IC004	B-6
IC006	C-3
IC007	B-2
IC008	A-2

TRANSISTOR	
Q001	A-5
Q003	B-4
Q004	B-4
Q005	B-4
Q006	A-3
Q007	A-1
Q008	A-1
Q009	C-5
Q010	B-1
Q011	C-1
Q012	B-5
Q013	B-1
Q014	A-1
Q015	B-2
Q016	B-3
Q017	B-3
Q018	A-3
Q019	A-1
Q020	A-3
Q021	A-4
Q022	C-4
Q023	C-6
Q024	B-4

DIODE	
D001	C-5
D002	A-4
D003	B-3
D004	A-5
D005	A-5
D006	B-4
D007	B-4
D008	C-5

VARIABLE RESISTOR	
RV001	B-3
RV002	A-1

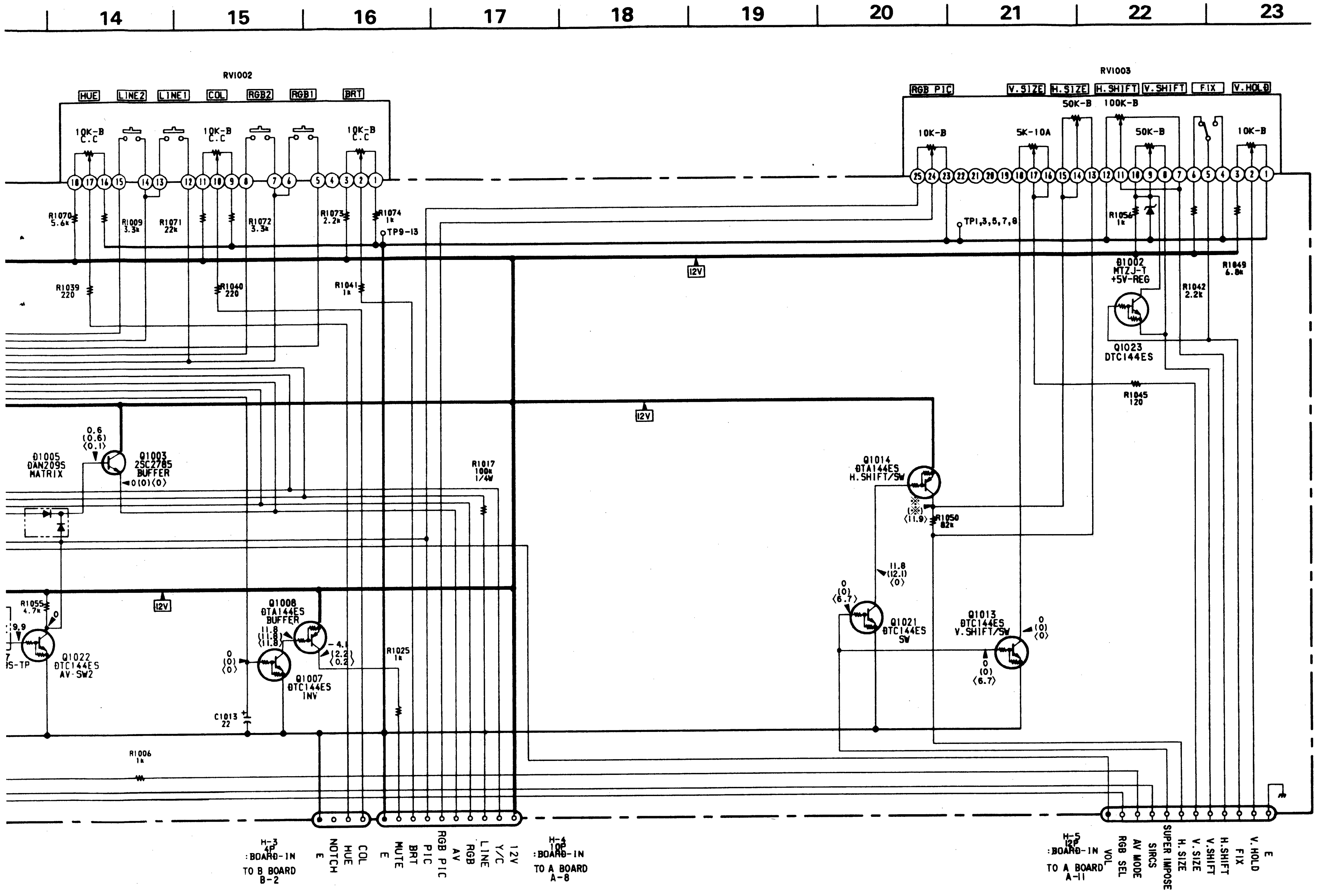
TP	
TP1	C-3
TP2	A-3
TP3	A-3
TP4	B-1


H (USER CONTROL)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
D1101
D1102
VOL-
VOL+
PIC+
PIC-
RV1001
RV1002
HUE
LINE2
LINE1
COL
RGB2
RGB1
BRT
10K-B C.C
12V
5V
H-6 2P :BOARD-IN
P ON
E
H-7 2P :BOARD-IN
TO G BOARD G-4
AC OUT
AC IN
AC IN
AC OUT
AC OUT
AC IN
S1001
PRIMARY
H-2 7P WHT :VH
TO G BOARD G-7
ST-BY 5V
E
ST-BY
H-1 3P WHT :S-MICRO
L1001 100μH :AL1
R1060 2.2k
Q1001 DTC144ES LED-SW1
Q1002 DTC144ES LED-SW2
Q1004 DTC144ES LED-SW3
Q1005 DTC144ES LED-SW4
Q1015 DTC124ES SIRCS-BUFF
D1001 DAP209S SW
R1001 560
R1002 560
R1003 220 1/4W
R1004 560
R1005 560
R1026 1k 1/4W
R1051 1k
R1008 10k
R1099 1k
D1010 RD5.6ESB2 PROTECT
CP1002
R1012 2.2k
R1014 2.2k
R1016 2.2k
C1002 100p
C1003 100p
X1001
R1020 6.8k
C1004 0.022
R1007 100
C1001 10
R1010 100k
R1011 1k
R1013 1k
R1015 1k
R1018 1k
R1019 22k
D1006 1SS133T-77 MUTE-DELAY
D1000 MTZJ-T PROTECT
Q1006 2SC2785 RESET
R1021 2.2k
C1005 0.022
R1023 4.7k
R1024 560
C1007 0.022
R1022 22k
D1003 RD3.6ESL1 RESET
C1006 47 16V
IC1001 μPD7564C CONTROL
IC1002 CXK-1011P MEMORY
D1008 MTZJ-T PROTECT
D1009 1SS133T-77 PROTECT
IC1003 RC78L05A 5V-REG
C1008 0.022
C1009 0.022
L1002 470μH :FLR50
C1010 47 16V
IC1004 μPD6326C D/A-CONVERTER
CP1001 2.2K×6
C1011
C1012
R1031 2.2k
R1033 2.2k
R1034 2.2k
R1036 2.2k
R1037 2.2k
R1038 2.2k
R1030 2.2k
R1032 22k
R1035 1k
D1005 DAN209S MATRIX
Q1003 2SC2785 BUFFER
R1054 10k
R1055 4.7k
D1007 DAN209S-TP
Q1019 DTC114ES AV-SW1
Q1022 DTC144ES AV-SW2
Q1008 DTA144ES BUFFER
Q1007 DTC144ES INV
C1013 22
R1006 1k
R1025 1k
R1070 5.6k
R1009 3.3k
R1071 22k
R1072 3.3k
R1073 2.2k
R1074 1k
TP9
R1039 220
R1040 220
R1041 1k
H-3 4P :BOARD-IN
TO B BOARD B-2
NOTCH
E
HUE
COL
MUTE
E

HBOARD

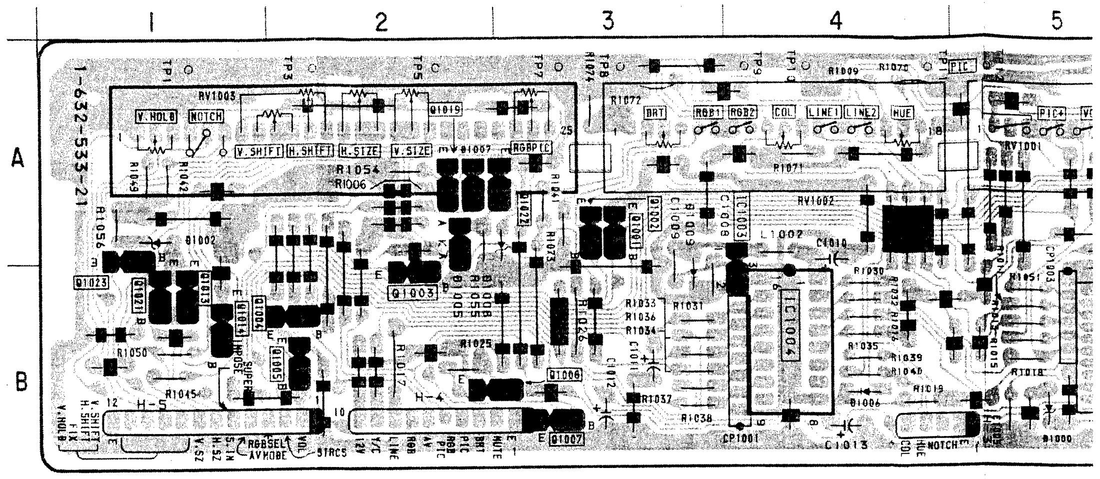
Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q1001	B	10.3	10.3	10.3	10.3	10.3	0
	C	0	0	0	0	0	10.6
	E						
Q1002	B	0	0	0	0	0	0
	C	11.3	11.0	11.0	11.0	11.0	10.6
	E						
Q1003	B	0.6	0.6	0.6	0.6	0.6	0.1
	C						
	E	0	0	0	0	0	0
Q1004	B	0	0	0	0	0	0
	C	11.0	11.0	10.6	10.6	10.6	10.6
	E						
Q1005	B	0	0	0	0	0	9.3
	C	11.6	11.6	10.7	11.6	11.6	0
	E						
Q1007	B	0	0	0	0	0	0
	C	12.0	12.4	11.8	11.8	11.8	11.8
	E						
Q1008	B	12.0	12.4	11.8	11.8	11.8	11.8
	C	-2.7	-2.2	-4.1	-2.2	-2.2	-0.2
	E						
Q1013	B	0	0	0	0	0	6.7
	C	0	0	0	0	0	0
	E						
Q1014	B	12.1	12.1	11.8	12.1	12.1	0
	C	*	*	*	*	*	11.9
	E						
Q1021	B	0	0	0	0	0	6.7
	C	12.1	12.1	11.8	12.1	12.1	0
	E						

IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC1004	⑩	0	0	0	0	10.7	0
	⑪	10.8	10.8	10.8	10.8	0	0
	⑬	0	0	0	0	0	10.7

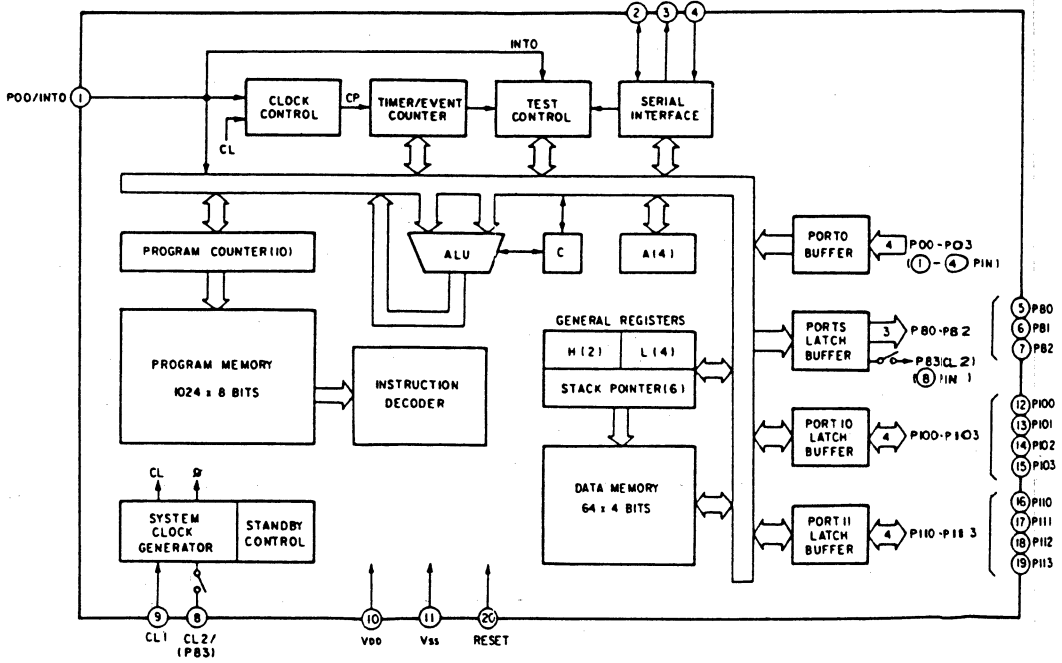

14
15
16
17
18
19
20
21
22
23
RV1002
HUE
LINE2
LINE1
COL
RGB2
RGB1
BRT
10K-B C.C
RV1003
RGB PIC
V.SIZE
H.SIZE
H.SHIFT
V.SHIFT
FIX
V.HOLD
10K-B
5K-10A
50K-B
100K-B
50K-B
10K-B
R1070 5.6k
R1009 3.3k
R1071 22k
R1072 3.3k
R1073 2.2k
R1074 1k
TP9-13
TP1,3,5,7,8
R1056 1k
R1049 6.8k
R1039 220
R1040 220
R1041 1k
12V
D1002 MTZJ-T +5V-REG
R1042 2.2k
Q1023 DTC144ES
R1045 120
Q1005 DAN209S MATRIX
0.6 (0.6) (0.1)
Q1003 2SC2785 BUFFER
0 (0) (0)
R1017 100k 1/4W
Q1014 DTA144ES H.SHIFT/SW
(11.9)
R1050 82k
11.8 (12.1) (0)
0 (0) (6.7)
Q1021 DTC144ES SW
Q1013 DTC144ES V.SHIFT/SW
0 (0) (0)
0 (0) (6.7)
R1055 4.7k
9.9
Q1022 DTC144ES AV-SW2
Q1008 DTA144ES BUFFER
11.8 (11.8) (11.8)
-4.1 (2.2) (0.2)
0 (0) (0)
Q1007 DTC144ES INV
R1025 1k
C1013 22
R1006 1k
H-3 4P :BOARD-IN TO B BOARD B-2
E
NOTCH
HUE
COL
E
MUTE
BRT
PIC
RGB PIC
AV
RGB
LINE
Y/C
12V
H-4 10P :BOARD-IN TO A BOARD A-8
H-5 12P :BOARD-IN TO A BOARD A-11
VOL
RGB SEL
AV MODE
SIRCS
SUPER IMPOSE
H.SIZE
V.SIZE
V.SHIFT
H.SHIFT
FIX
V.HOLD
E

H [USER CONTROL]

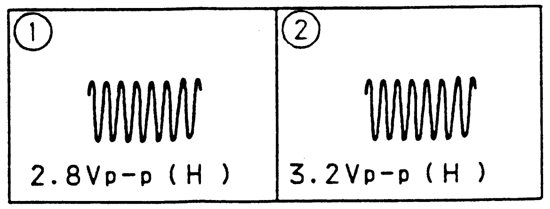
–H Board–

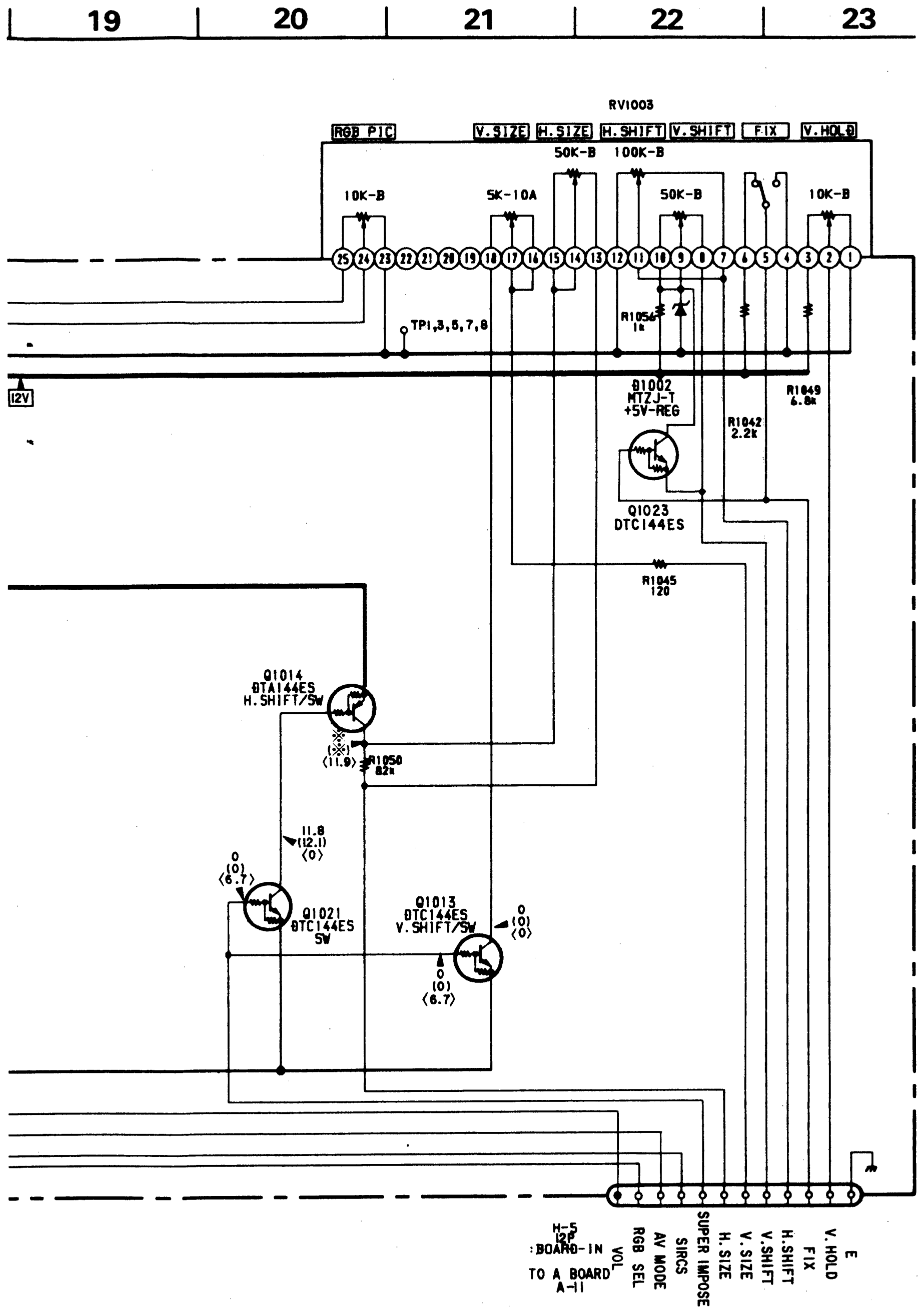

1
2
3
4
5
A
B
1-632-533-21
V.HOLD
NOTCH
V.SHIFT
H.SHIFT
H.SIZE
V.SIZE
RGB PIC
BRT
RGB1
RGB2
COL
LINE1
LINE2
HUE
PIC
RV1003
RV1002
IC1001
IC1003
IC1004
Q1003
H-5
H-4
H-3
CP1001
C1013

H BOARD
IC1001 µPD7564G

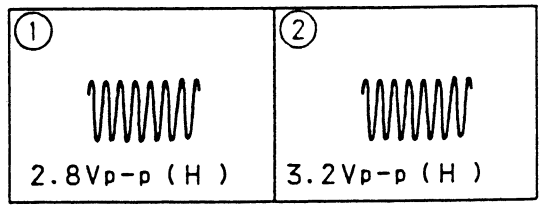

P01/SCK
P02/SO
P03/SI
②
③
④
INT0
P00/INT0
①
CLOCK CONTROL
CP
TIMER/EVENT COUNTER
TEST CONTROL
SERIAL INTERFACE
CL
PROGRAM COUNTER(10)
ALU
C
A(4)
PORT0 BUFFER
4
P00-P03
①-④ PIN
PROGRAM MEMORY
1024 x 8 BITS
INSTRUCTION DECODER
GENERAL REGISTERS
H(2)
L(4)
STACK POINTER(6)
PORT8 LATCH BUFFER
3
P80-P82
P83(CL2)
⑧ IN
PORT10 LATCH BUFFER
P100-P103
DATA MEMORY
64 x 4 BITS
PORT11 LATCH BUFFER
P110-P113
SYSTEM CLOCK GENERATOR
STANDBY CONTROL
CL
⑨
⑧
⑩
⑪
⑳
CL1
CL2/(P83)
VDD
VSS
RESET
⑤P80
⑥P81
⑦P82
⑫P100
⑬P101
⑭P102
⑮P103
⑯P110
⑰P111
⑱P112
⑲P113

H BOARD WAVEFORMS



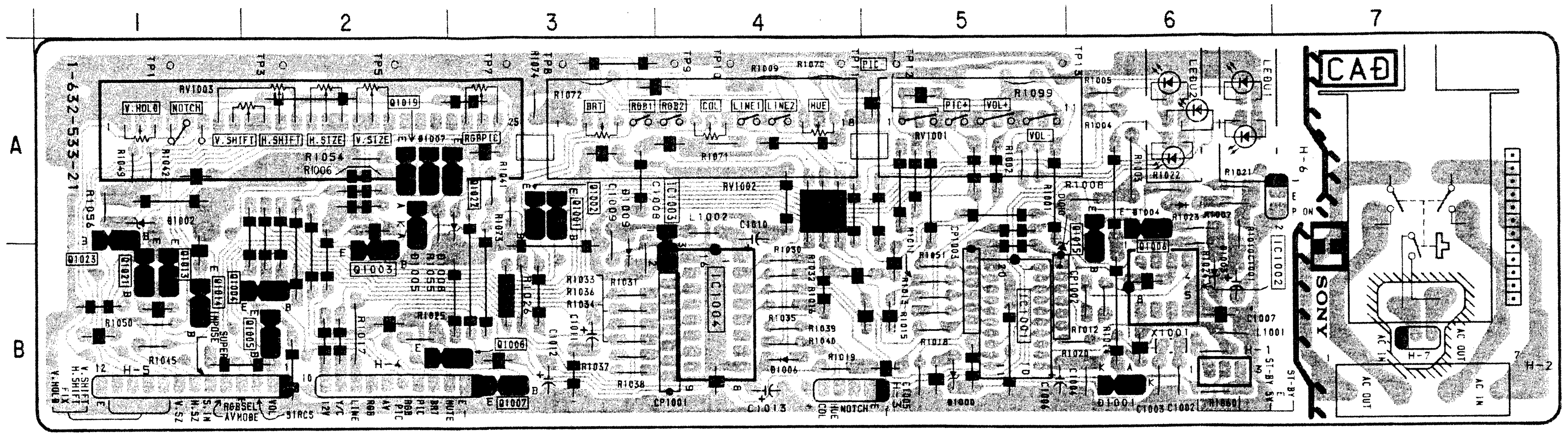

19
20
21
22
23
RV1003
RGB PIC
V.SIZE
H.SIZE
H.SHIFT
V.SHIFT
FIX
V.HOLD
50K-B
100K-B
10K-B
5K-10A
50K-B
10K-B
TP1,3,5,7,8
12V
R1056 1k
D1002 MTZJ-T +5V-REG
R1042 2.2k
R1049 6.8k
Q1023 DTC144ES
R1045 120
Q1014 DTA144ES H.SHIFT/SW
R1050 82k
(11.9)
11.8 (12.1) ⟨0⟩
0 (0) ⟨6.7⟩
Q1021 DTC144ES SW
Q1013 DTC144ES V.SHIFT/SW
0 (0) ⟨0⟩
0 (0) ⟨6.7⟩
H-5 12P :BOARD-IN
TO A BOARD A-11
VOL
RGB SEL
AV MODE
SIRCS
SUPER IMPOSE
H.SIZE
V.SIZE
V.SHIFT
H.SHIFT
FIX
V.HOLD
E

H BOARD WAVEFORMS

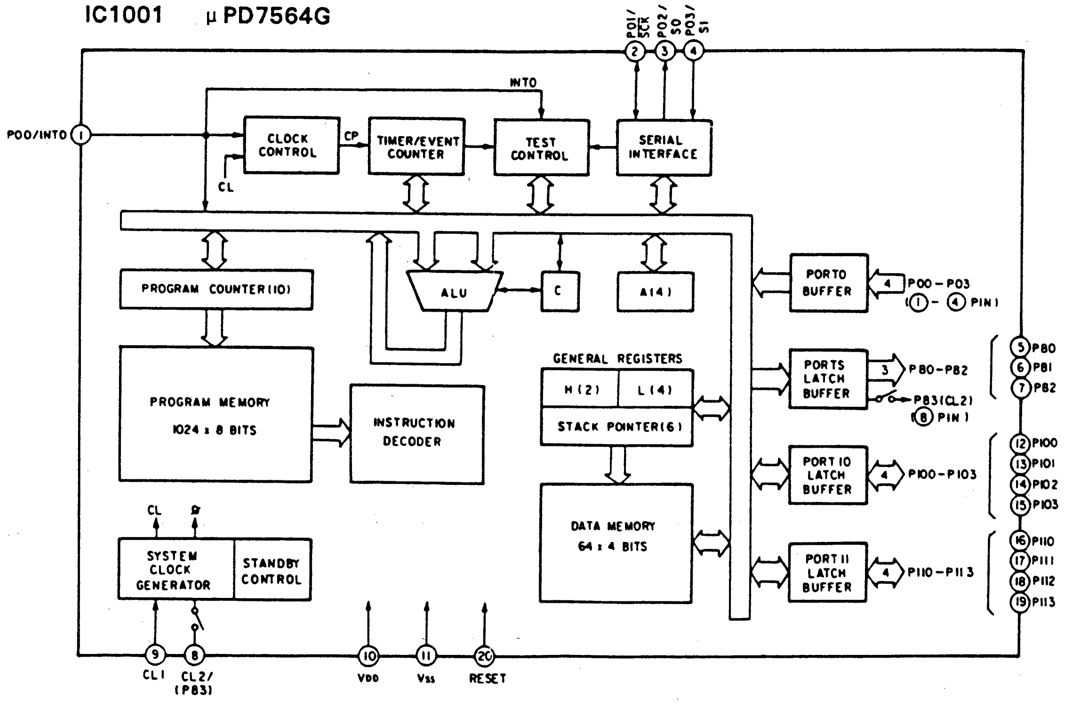


H [USER CONTROL]

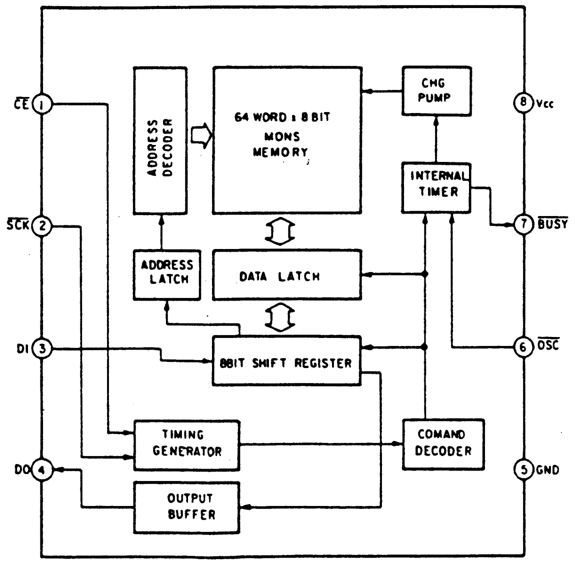
—H Board—


1
2
3
4
5
6
7
A
B
1-632-533-21
CAD
SONY
V.HOLD
NOTCH
RV1003
V.SHIFT
H.SHIFT
H.SIZE
V.SIZE
RGBPIC
BRT
COL
LINE1
LINE2
HUE
PIC
VOL+
VOL
RV1001
RV1002
IC1003
IC1004
IC1001
IC1002
X1001
H-2
H-4
H-5
H-6
H-7
AC OUT
AC IN

H BOARD
IC1001 μPD7564G


P01/SCK
P02/SO
P03/SI
INTO
P00/INTO
CLOCK CONTROL
CP
TIMER/EVENT COUNTER
TEST CONTROL
SERIAL INTERFACE
CL
PROGRAM COUNTER(10)
ALU
C
A(4)
PORT0 BUFFER
P00-P03
(①-④PIN)
PROGRAM MEMORY 1024 x 8 BITS
INSTRUCTION DECODER
GENERAL REGISTERS
H(2)
L(4)
STACK POINTER(6)
PORT8 LATCH BUFFER
P80-P82
P83(CL2) (⑧PIN)
P80
P81
P82
PORT10 LATCH BUFFER
P100-P103
P100
P101
P102
P103
DATA MEMORY 64 x 4 BITS
PORT11 LATCH BUFFER
P110-P113
P110
P111
P112
P113
SYSTEM CLOCK GENERATOR
STANDBY CONTROL
CL1
CL2/(P83)
VDD
VSS
RESET

H BOARD
IC1002 CXK1011P

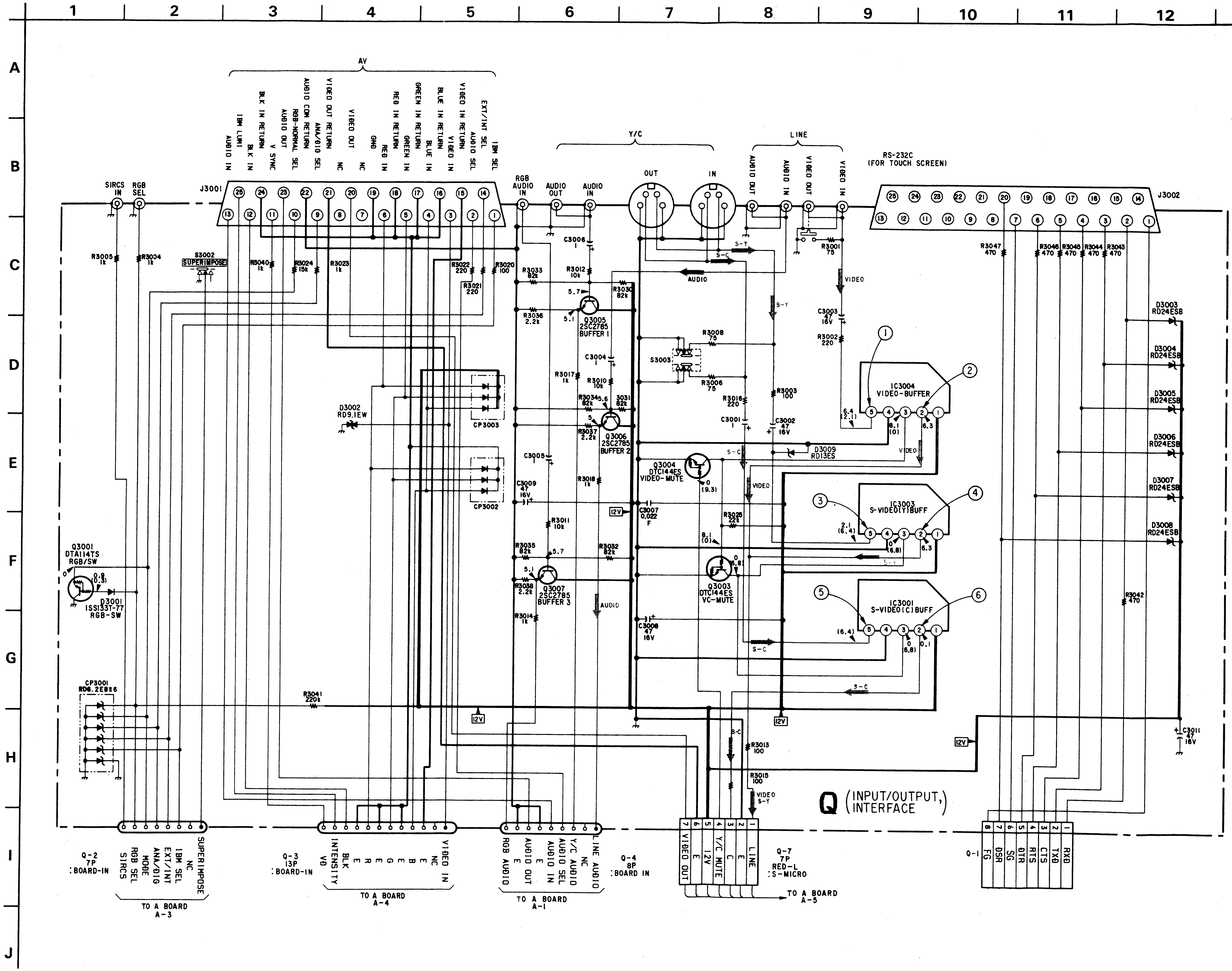

CE
SCK
DI
DO
ADDRESS DECODER
64 WORD x 8 BIT MONS MEMORY
CHG PUMP
INTERNAL TIMER
ADDRESS LATCH
DATA LATCH
8BIT SHIFT REGISTER
TIMING GENERATOR
COMAND DECODER
OUTPUT BUFFER
Vcc
BUSY
OSC
GND

IC	
IC1001	B-5
IC1002	B-6
IC1003	A-4
IC1004	B-4

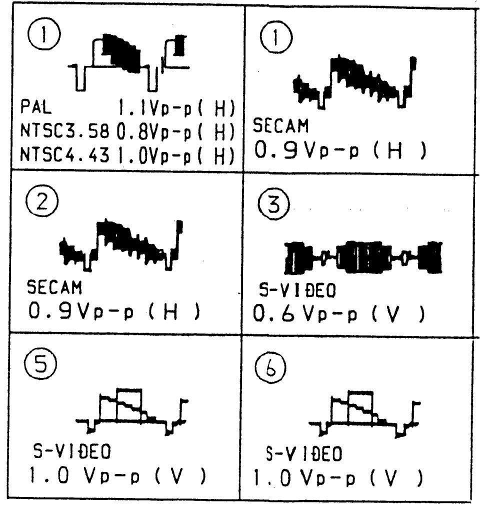
TRANSISTOR	
Q1001	A-3
Q1002	A-3
Q1003	B-2
Q1004	B-2
Q1005	B-2
Q1006	A-6
Q1007	B-3
Q1008	B-2
Q1013	B-1
Q1014	B-1
Q1015	A-6
Q1019	A-2
Q1021	B-1
Q1022	A-3
Q1023	

DIODE	
D1000	B-5
D1001	B-6
D1002	A-1
D1003	B-6
D1005	A-2
D1006	B-4
D1007	A-2
D1008	A-3
D1009	B-3
D1010	A-6
D1101	A-6
D1102	A-6

VARIABLE RESISTOR	
RV1001	A-5
RV1002	A-4
RV1003	A-2


Q (INPUT/OUTPUT, INTERFACE)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J
AV
Y/C
LINE
RS-232C (FOR TOUCH SCREEN)
J3001
J3002
SIRCS IN
RGB SEL
RGB AUDIO IN
AUDIO OUT
AUDIO IN
OUT
IN
IBM SEL
AUDIO SEL
EXT/INT SEL
VIDEO IN
VIDEO IN RETURN
BLUE IN
BLUE IN RETURN
GREEN IN
GREEN IN RETURN
RED IN
RED IN RETURN
GND
NC
VIDEO OUT
VIDEO OUT RETURN
ANA/DIG SEL
AUDIO COM RETURN
RGB-NORMAL SEL
AUDIO OUT
V SYNC
BLK IN RETURN
BLK IN
IBM LUMI
AUDIO IN
VIDEO OUT
S3002 SUPERIMPOSE
S3003
Q3001 DTA114TS RGB/SW
D3001 1SS133T-77 RGB-SW
D3002 RD9.1EW
CP3001 RD6.2EB×6
CP3002
CP3003
Q3005 2SC2785 BUFFER 1
Q3006 2SC2785 BUFFER 2
Q3007 2SC2785 BUFFER 3
Q3004 DTC144ES VIDEO-MUTE
Q3003 DTC144ES VC-MUTE
D3009 RD13ES
IC3004 VIDEO-BUFFER
IC3003 S-VIDEO(Y)BUFF
IC3001 S-VIDEO(C)BUFF
D3003 RD24ESB
D3004 RD24ESB
D3005 RD24ESB
D3006 RD24ESB
D3007 RD24ESB
D3008 RD24ESB
R3047 470
R3046 470
R3045 470
R3044 470
R3043 470
R3042 470
C3011 47 16V
R3005 1k
R3004 1k
R3040 1k
R3024 15k
R3023 1k
R3022 220
R3021 220
R3020 100
R3033 82k
R3012 10k
R3030 82k
R3036 2.2k
R3017 1k
R3010 10k
R3034 82k
R3031 82k
R3037 2.2k
R3018 1k
R3011 10k
R3035 82k
R3032 82k
R3038 2.2k
R3014 1k
R3041 220k
R3008 75
R3006 75
R3016 220
R3003 100
R3001 75
R3002 220
R3025 22k
R3013 100
R3015 100
C3006
C3004
C3005
C3009 47 16V
C3007 0.022 F
C3008 47 16V
C3001
C3002 47 16V
C3003 47 16V
12V
S-Y
S-C
AUDIO
VIDEO
VIDEO S-Y
Q-2 7P :BOARD-IN
SUPERIMPOSE
NC
IBM SEL
EXT/INT
ANA/DIG
MODE
RGB SEL
SIRCS
TO A BOARD A-3
Q-3 13P :BOARD-IN
VIDEO IN
NC
B
E
G
E
R
E
BLK
INTENSITY
VD
TO A BOARD A-4
Q-4 8P :BOARD IN
LINE AUDIO
NC
Y/C AUDIO
AUDIO SEL
AUDIO IN
AUDIO OUT
E
RGB AUDIO
TO A BOARD A-1
Q-7 7P RED-L :S-MICRO
LINE
E
C
Y/C MUTE
12V
E
VIDEO OUT
TO A BOARD A-5
Q-1
RXD
TXD
CTS
RTS
DTR
SG
DSR
FG

Q BOARD WAVEFORMS

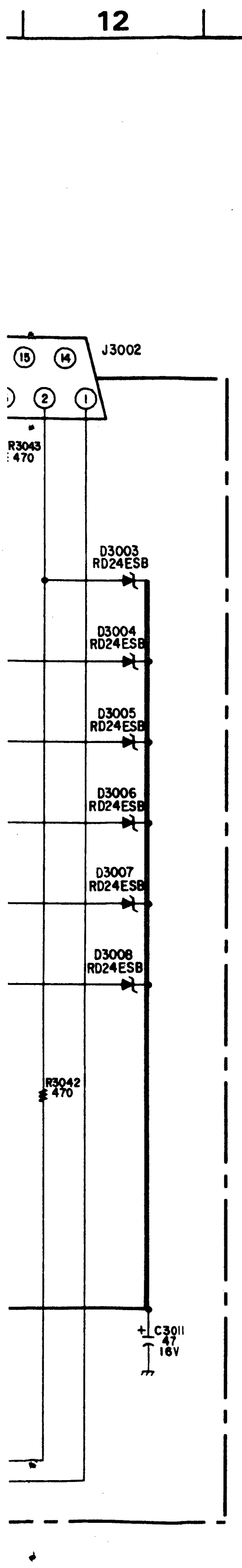


QBOARD

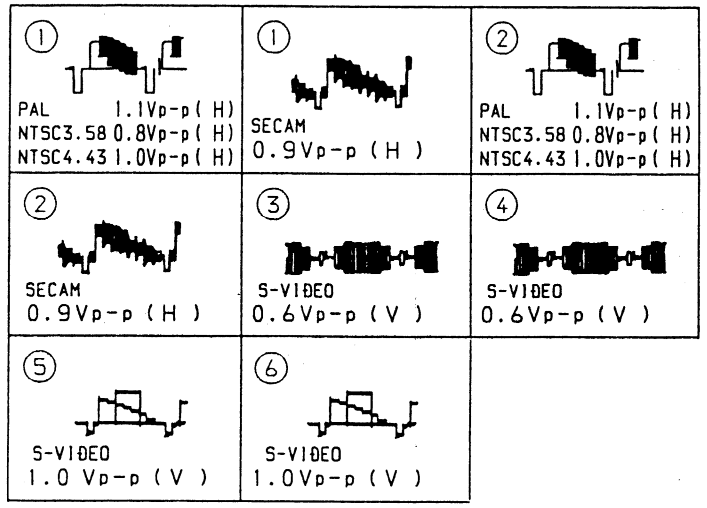
IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58
IC3001	②	0	0	0
	③	0	0	0
	⑤	2.1	2.1	2.1
IC3003	②	0	6.1	6.1
	③	0	0	0
	⑤	2.1	2.1	2.1
IC3004	②	0	6.1	6.1
	③	7.9	7.9	7.9
	⑤	6.2	6.2	6.2

Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43
Q3004	B	0	0	0	0
	C	7.9	7.9	7.9	7.9
	E				

[INPUT/OUTPUT, INTERFACE] **Q** **Q**


12
13
14
15
16
J3002
R3043
470
D3003
RD24ESB
D3004
RD24ESB
D3005
RD24ESB
D3006
RD24ESB
D3007
RD24ESB
D3008
RD24ESB
R3042
470
C3011
47
16V

Q BOARD WAVEFORMS

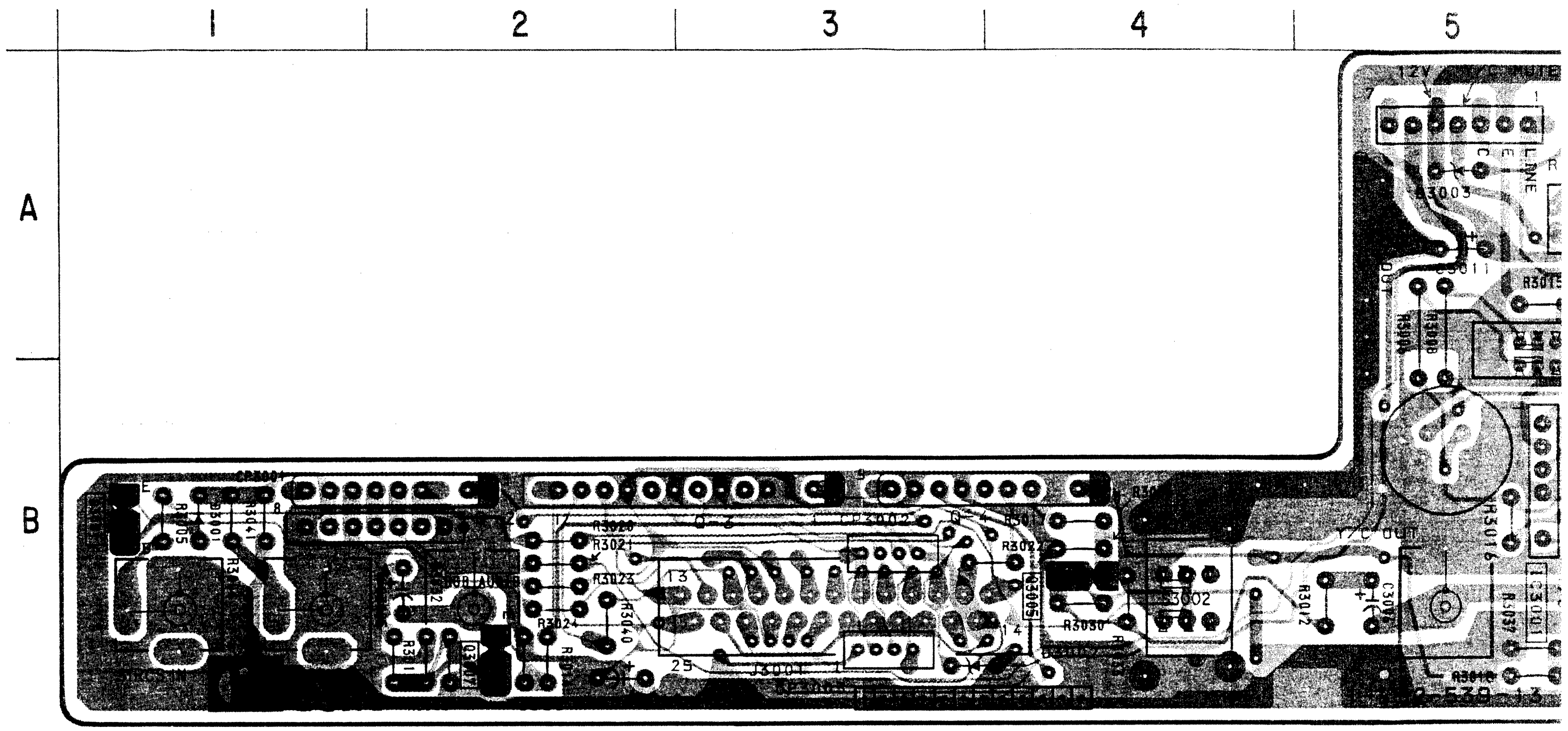

①
PAL 1.1Vp-p(H)
NTSC3.58 0.8Vp-p(H)
NTSC4.43 1.0Vp-p(H)
①
SECAM
0.9Vp-p (H)
②
PAL 1.1Vp-p(H)
NTSC3.58 0.8Vp-p(H)
NTSC4.43 1.0Vp-p(H)
②
SECAM
0.9Vp-p (H)
③
S-VIDEO
0.6Vp-p (V)
④
S-VIDEO
0.6Vp-p (V)
⑤
S-VIDEO
1.0 Vp-p (V)
⑥
S-VIDEO
1.0Vp-p (V)

QBOARD

IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
IC3001	②	0	0	0	0	6.1
	③	0	0	0	0	6.7
	⑤	2.1	2.1	2.1	2.1	6.2
IC3003	②	0	6.1	6.1	6.1	6.1
	③	0	0	0	0	6.7
	⑤	2.1	2.1	2.1	2.1	6.3
IC3004	②	0	6.1	6.1	6.1	6.1
	③	7.9	7.9	7.9	7.9	0
	⑤	6.2	6.2	6.2	6.2	2.1

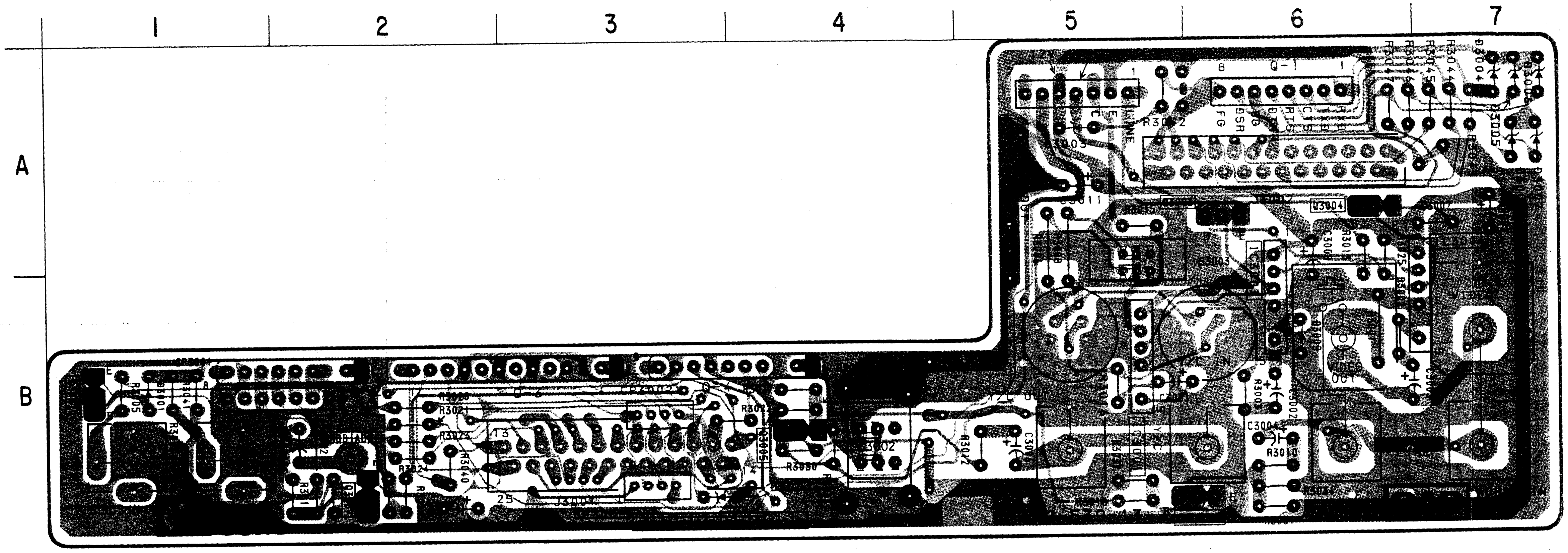
Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEQ
Q3004	B	0	0	0	0	9.1
	C	7.9	7.9	7.9	7.9	0
	E					

–Q Board–


1
2
3
4
5
A
B
12V
LINE
IC3003
C3011
R3015
R3016
R3020
R3021
R3023
R3024
R3040
R3022
R3050
R3012
IC3002
J3001
IC3005
C3007
R3037
R3018
13
25
CP3001

[INPUT/OUTPUT, INTERFACE] Q Q

-Q Board-


1
2
3
4
5
6
7
A
B
Q-1
8
1
LINE
FG
BSR
R3002
C3011
Q3004
IC3003
R3030
R3012
C3004
R3010
VIDEO OUT
IN
13
25
IC3001

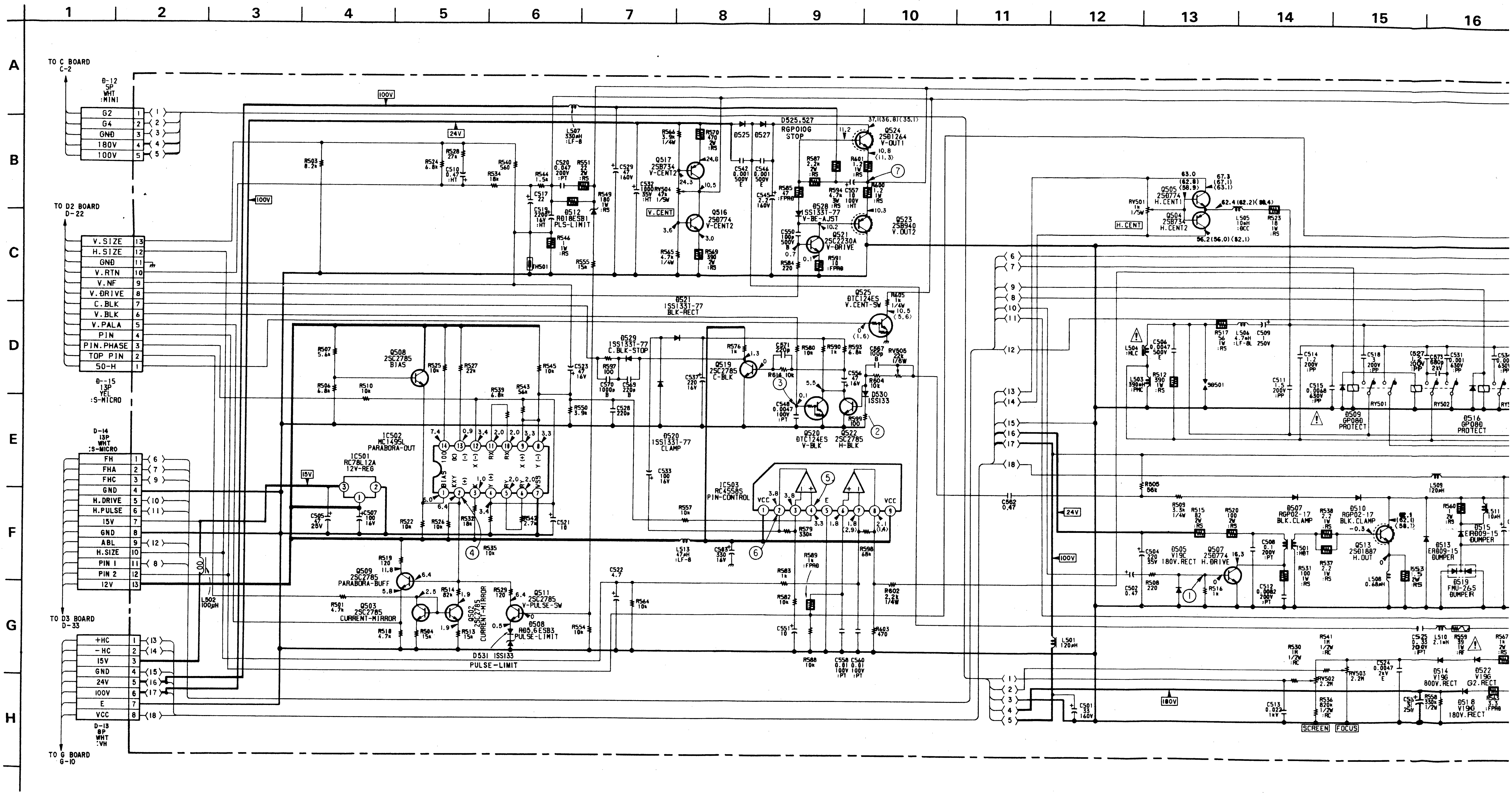
IC	
IC3001	B-5
IC3003	B-6
IC3004	B-6

TRANSISTOR	
Q3001	B-1
Q3003	A-6
Q3004	A-6
Q3005	B-4
Q3006	B-6
Q3007	B-2

DIODE	
D3001	B-1
D3002	B-3
D3003	A-5
D3004	A-7
D3005	A-7
D3006	A-7
D3007	A-7
D3008	A-7
D3009	B-6

Note :

- ▨ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

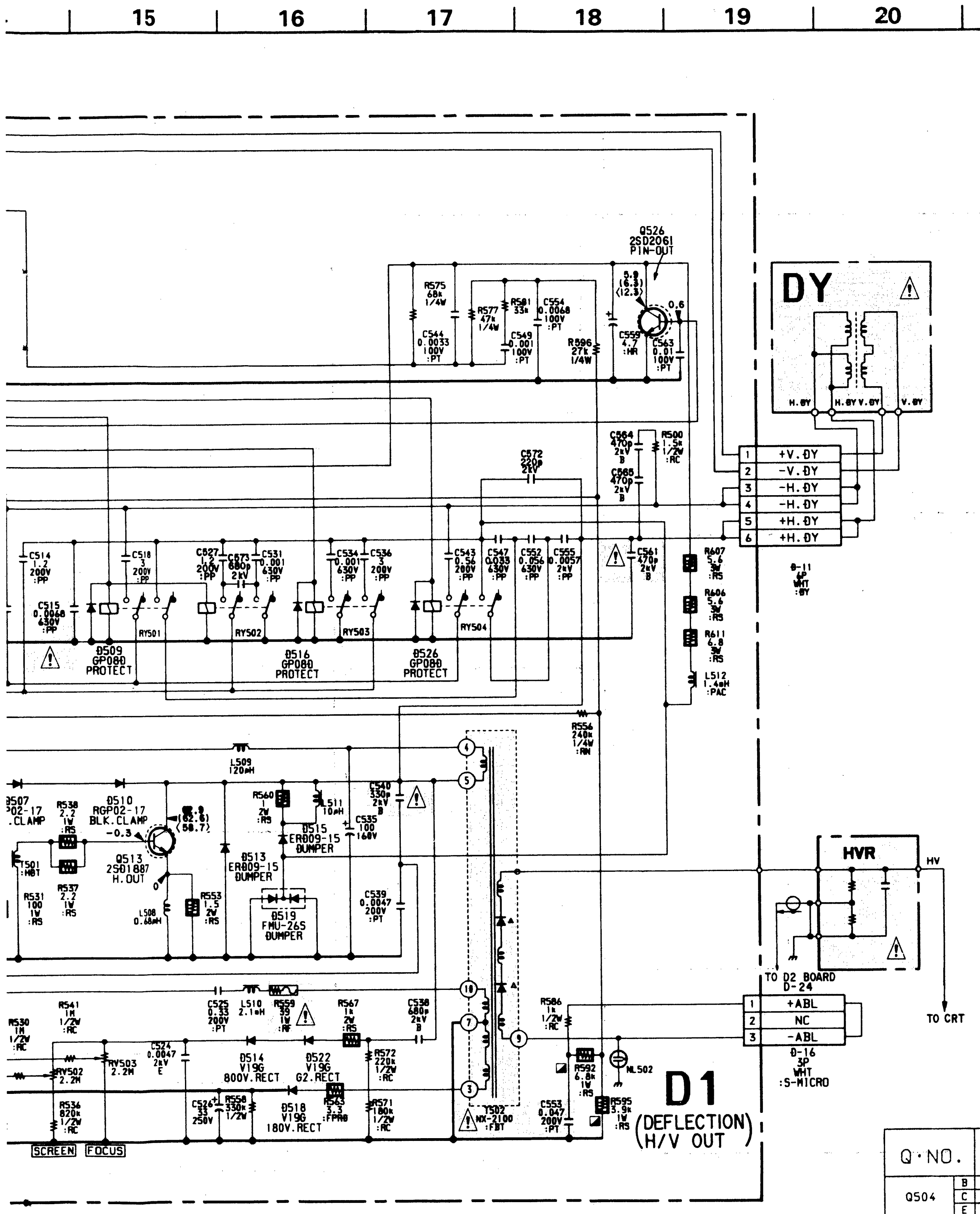

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
TO C BOARD C-2
D-12 5P WHT :MINI
G2
G4
GND
180V
100V
TO D2 BOARD D-22
V.SIZE
H.SIZE
GND
V.RTN
V.NF
V.DRIVE
C.BLK
V.BLK
V.PALA
PIN
PIN.PHASE
TOP PIN
50-H
D--15 13P YEL :S-MICRO
D-14 13P WHT :S-MICRO
FH
FHA
FHC
GND
H.DRIVE
H.PULSE
15V
GND
ABL
H.SIZE
PIN 1
PIN 2
12V
TO D3 BOARD D-33
+HC
-HC
15V
GND
24V
100V
E
VCC
D-13 8P WHT :VH
TO G BOARD G-10
100V
24V
15V
180V
Q508 2SC2785 BIAS
IC502 MC1495L PARABORA-OUT
IC501 RC78L12A 12V-REG
Q509 2SC2785 PARABORA-BUFF
Q503 2SC2785 CURRENT-MIRROR
Q502 2SC2785 CURRENT-MIRROR
Q511 2SC2785 V-PULSE-SW
D508 RD5.6ESB3 PULSE-LIMIT
D531 1SS133 PULSE-LIMIT
L502 100μH
D512 RD18ESB1 PLS-LIMIT
Q517 2SB734 V-CENT2
Q516 2SD774 V-CENT2
V.CENT
D525,527 RGP10G STOP
Q524 2SD1264 V-OUT1
Q523 2SB940 V.OUT2
D528 1SS133T-77 V-BE-AJST
Q521 2SC2230A V-DRIVE
D521 1SS133T-77 BLK-RECT
Q525 DTC124ES V.CENT-SW
D529 1SS133T-77 C.BLK-STOP
Q519 2SC2785 C-BLK
D520 1SS133T-77 CLAMP
Q520 DTC124ES V-BLK
Q522 2SC2785 H-BLK
D530 1SS133
IC503 RC4558S PIN-CONTROL
L513 47μH :LF-8
Q505 2SD774 H.CENT1
Q504 2SB734 H.CENT2
H.CENT
RV501 1k 1/5W
D509 GP08D PROTECT
D516 GP08D PROTECT
RY501
RY502
D505 V19C 180V.RECT
Q507 2SD774 H.DRIVE
D507 RGP02-17 BLK.CLAMP
D510 RGP02-17 BLK.CLAMP
Q513 2SD1887 H.OUT
D515 ERB09-15 DUMPER
D513 ERB09-15 DUMPER
D519 FMU-26S DUMPER
L501 120μH
D514 V19G 800V.RECT
D522 V19G G2.RECT
D518 V19G 180V.RECT
RV502 2.2M
RV503 2.2M
SCREEN
FOCUS

D1 BOA

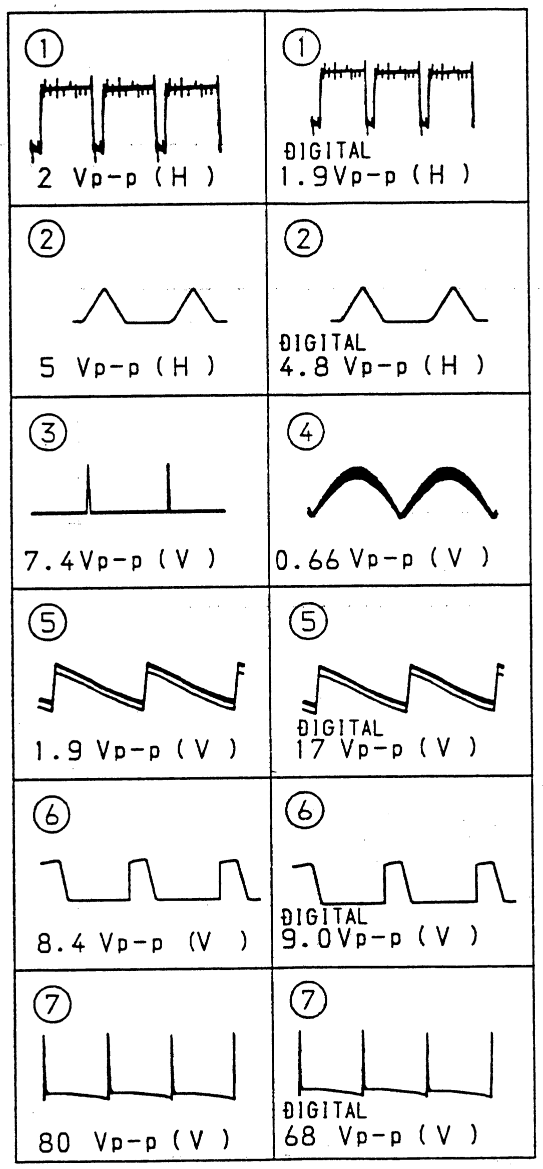
IC·NO.

IC503

D1 [DEFLECTION H/V OUT]


15
16
17
18
19
20
21
22
23
Q526 2SD2061 PIN-OUT
DY
+V.DY
-V.DY
-H.DY
-H.DY
+H.DY
+H.DY
D-11 6P WHT :DY
RY501
RY502
RY503
RY504
Q509 GP08D PROTECT
Q516 GP08D PROTECT
Q526 GP08D PROTECT
Q510 RGP02-17 BLK.CLAMP
Q513 2SD1887 H.OUT
Q515 ER009-15 DUMPER
Q513 ER809-15 DUMPER
Q519 FMU-26S DUMPER
L509 120mH
L512 1.4mH :PAC
HVR
HV
TO CRT
TO D2 BOARD D-24
+ABL
NC
-ABL
D-16 3P WHT :S-MICRO
Q514 V19G 800V.RECT
Q522 V19G G2.RECT
Q518 V19G 180V.RECT
T502 NX-2100 :FBT
NL502
SCREEN
FOCUS
D1 (DEFLECTION H/V OUT)

D1 BOARD WAVEFORMS

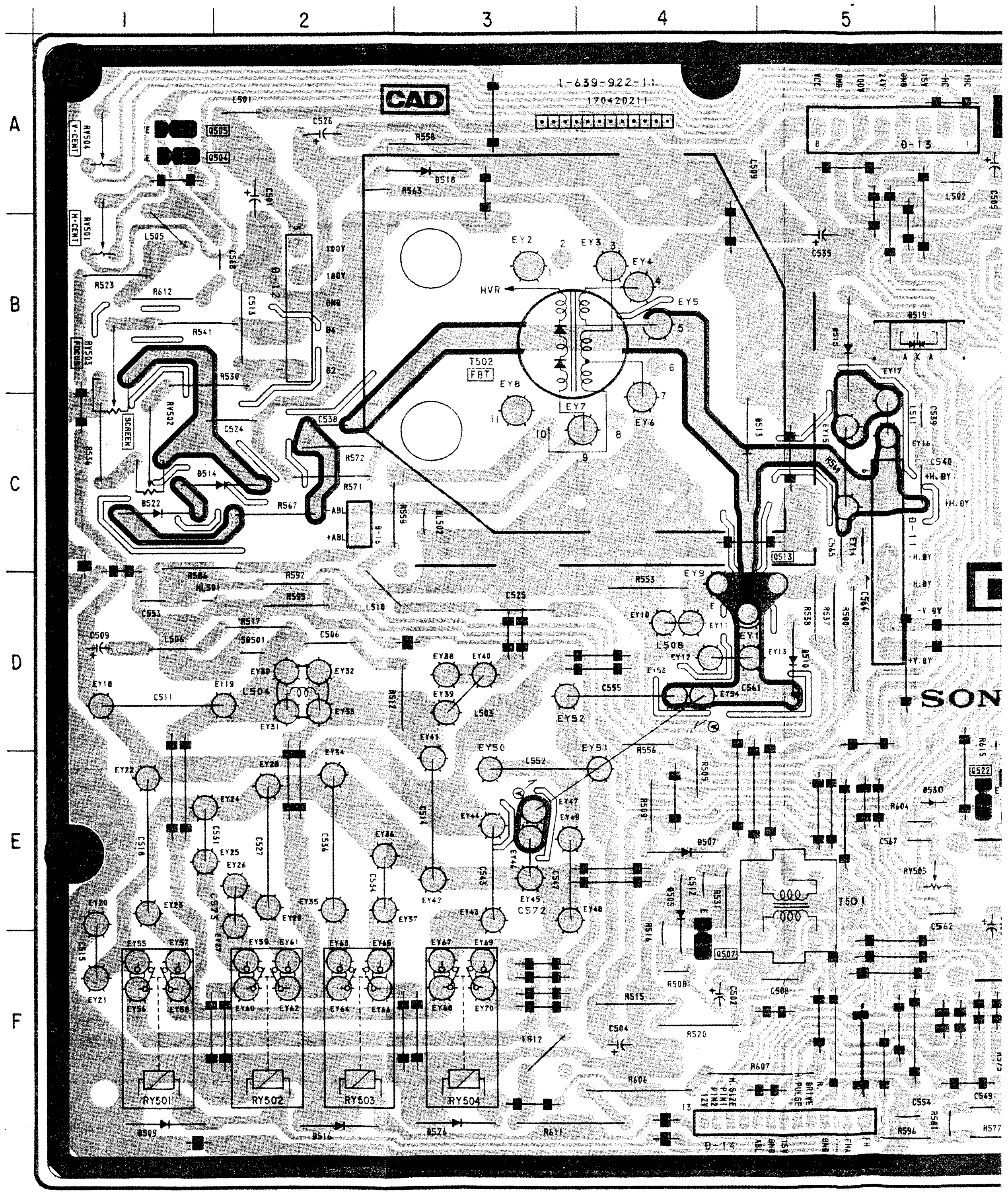


D1 BOARD

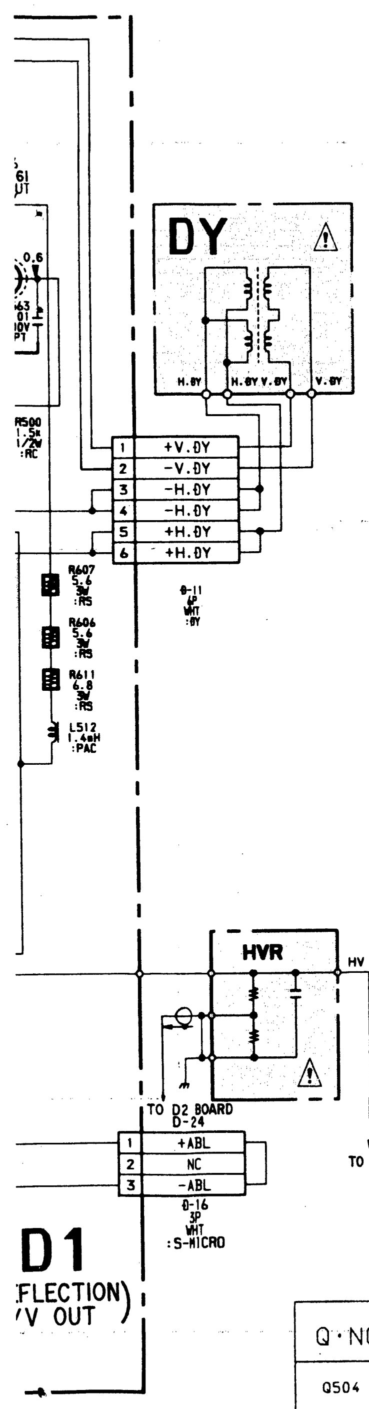
IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC503	⑦	1.8	1.8	1.8	1.8	1.8	2.9
	⑧	2.1	2.1	2.1	2.1	2.1	1.4

Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q504	B	62.8	62.8	63.0	63.0	62.8	58.9
	C	56.0	56.0	56.2	56.0	56.0	52.1
	E	62.2	62.2	62.4	62.2	62.2	58.4
Q505	B	62.8	62.8	63.0	63.0	62.8	58.9
	C	67.1	67.1	67.3	67.1	67.1	63.1
	E	62.2	62.2	62.4	62.2	62.2	58.4
Q513	B	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	C	62.6	62.6	62.9	62.8	62.6	58.7
	E	0	0	0	0	0	0
Q515	B	1.8	1.8	1.8	1.8	1.8	2.8
	C	6.2	6.2	5.8	6.2	6.2	12.0
	E	1.8	1.8	1.8	1.8	1.8	2.8
Q524	B	11.2	11.2	11.2	11.2	11.2	11.7
	C	38.2	38.2	37.1	36.8	36.8	35.1
	E	10.8	10.8	10.8	10.8	10.8	11.3
Q525	B	7.6	7.6	0	0	0	1.6
	C	0	0	10.5	10.5	10.5	5.6
	E						
Q526	B	0.6	0.6	0.6	0.6	0.6	0.6
	C	6.3	6.3	5.9	6.3	6.3	12.3
	E						

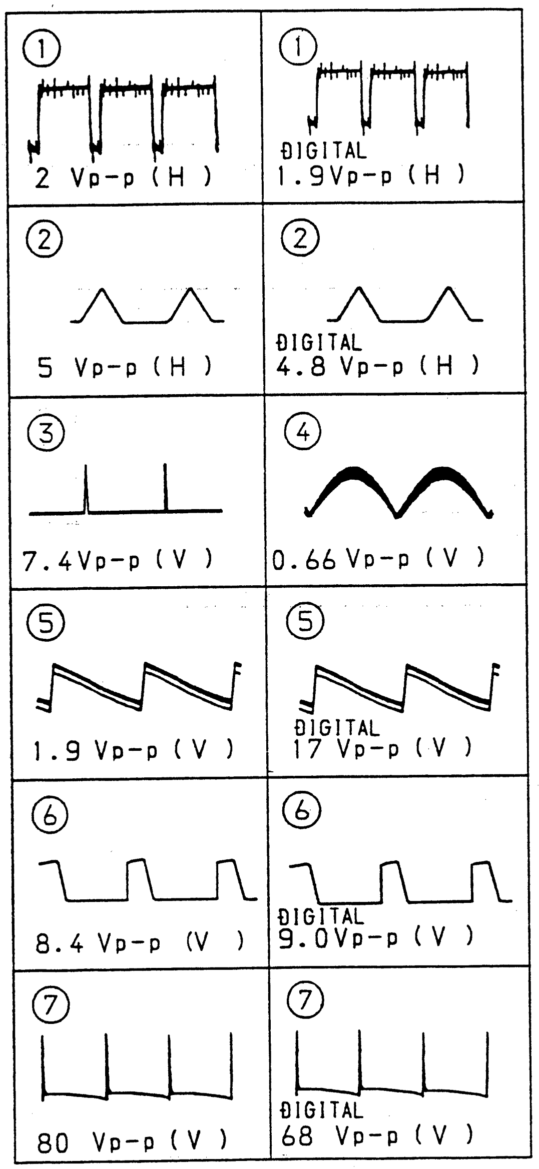
—D1 Board—


1
2
3
4
5
A
B
C
D
E
F
CAD
1-639-922-11
T502 FBT
RY501
RY502
RY503
RY504
D-13
D-11
D-14
SON

19	20	21	22	23


DY
H.DY
H.DY V.DY
V.DY
1 +V.DY
2 -V.DY
3 -H.DY
4 -H.DY
5 +H.DY
6 +H.DY
θ-11 6P WHT :DY
R607 5.6 3W :RS
R606 5.6 3W :RS
R611 6.8 3W :RS
L512 1.4mH :PAC
HVR
HV
TO CRT
TO D2 BOARD D-24
1 +ABL
2 NC
3 -ABL
θ-16 3P WHT :S-MICRO
D1
FLECTION)
/V OUT

D1 BOARD WAVEFORMS

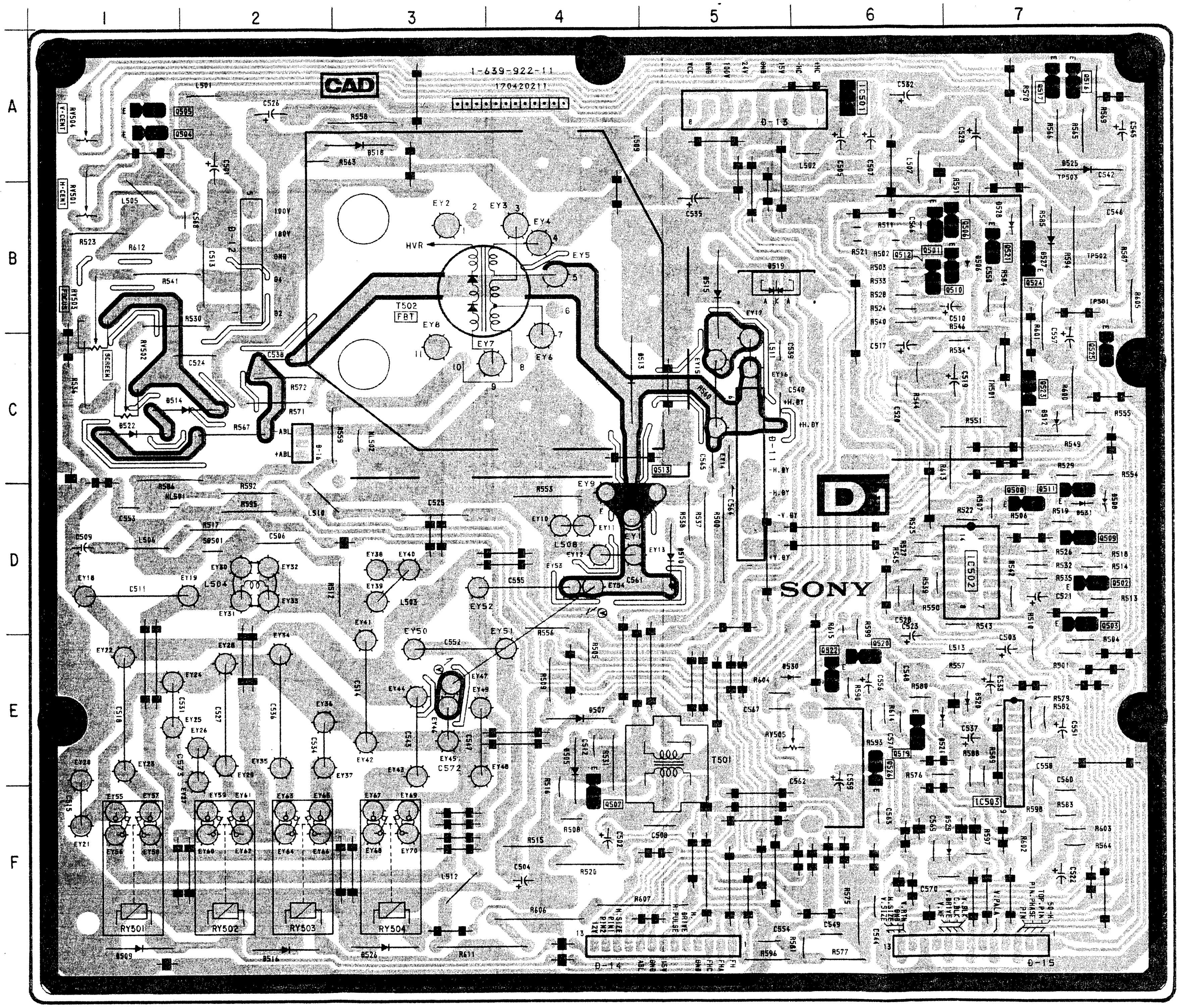


Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIĐEO	ĐIGITAL
Q504	B	62.8	62.8	63.0	63.0	62.8	58.9
	C	56.0	56.0	56.2	56.0	56.0	52.1
	E	62.2	62.2	62.4	62.2	62.2	58.4
Q505	B	62.8	62.8	63.0	63.0	62.8	58.9
	C	67.1	67.1	67.3	67.1	67.1	63.1
	E	62.2	62.2	62.4	62.2	62.2	58.4
Q513	B	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	C	62.6	62.6	62.9	62.8	62.6	58.7
	E	0	0	0	0	0	0
Q515	B	1.8	1.8	1.8	1.8	1.8	2.8
	C	6.2	6.2	5.8	6.2	6.2	12.0
	E	1.8	1.8	1.8	1.8	1.8	2.8
Q524	B	11.2	11.2	11.2	11.2	11.2	11.7
	C	38.2	38.2	37.1	36.8	36.8	35.1
	E	10.8	10.8	10.8	10.8	10.8	11.3
Q525	B	7.6	7.6	0	0	0	1.6
	C	0	0	10.5	10.5	10.5	5.6
	E						
Q526	B	0.6	0.6	0.6	0.6	0.6	0.6
	C	6.3	6.3	5.9	6.3	6.3	12.3
	E						

NTSC 4.43	S-VIĐEO	ĐIGITAL
1.8	1.8	2.9
2.1	2.1	1.4

D1 [DEFLECTION H/V OUT]

-D1 Board-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7
A
B
C
D
E
F
CAD
1-639-922-11
170420211
HVR
T502 FBT
EY2
EY3
EY4
EY5
EY6
EY7
T501
IC501
IC502
IC503
D1
SONY
RV501
RV502
RV503
RV504
RV505
θ-13
θ-14
θ-15
SCREEN
H.DY
V.DY
+ABL
-ABL
100V
BRT
H.CENT
V.CENT

D1

IC	
IC501	A-6
IC502	D-7
IC503	E-7

TRANSISTOR	
Q502	D-7
Q503	D-7
Q504	A-1
Q505	A-1
Q507	F-4
Q508	D-7
Q509	D-7
Q511	D-7
Q513	D-4
Q516	A-7
Q517	A-7
Q519	E-6
Q520	E-6
Q521	B-7
Q522	E-6
Q523	C-7
Q524	B-7
Q525	C-7
Q526	E-6

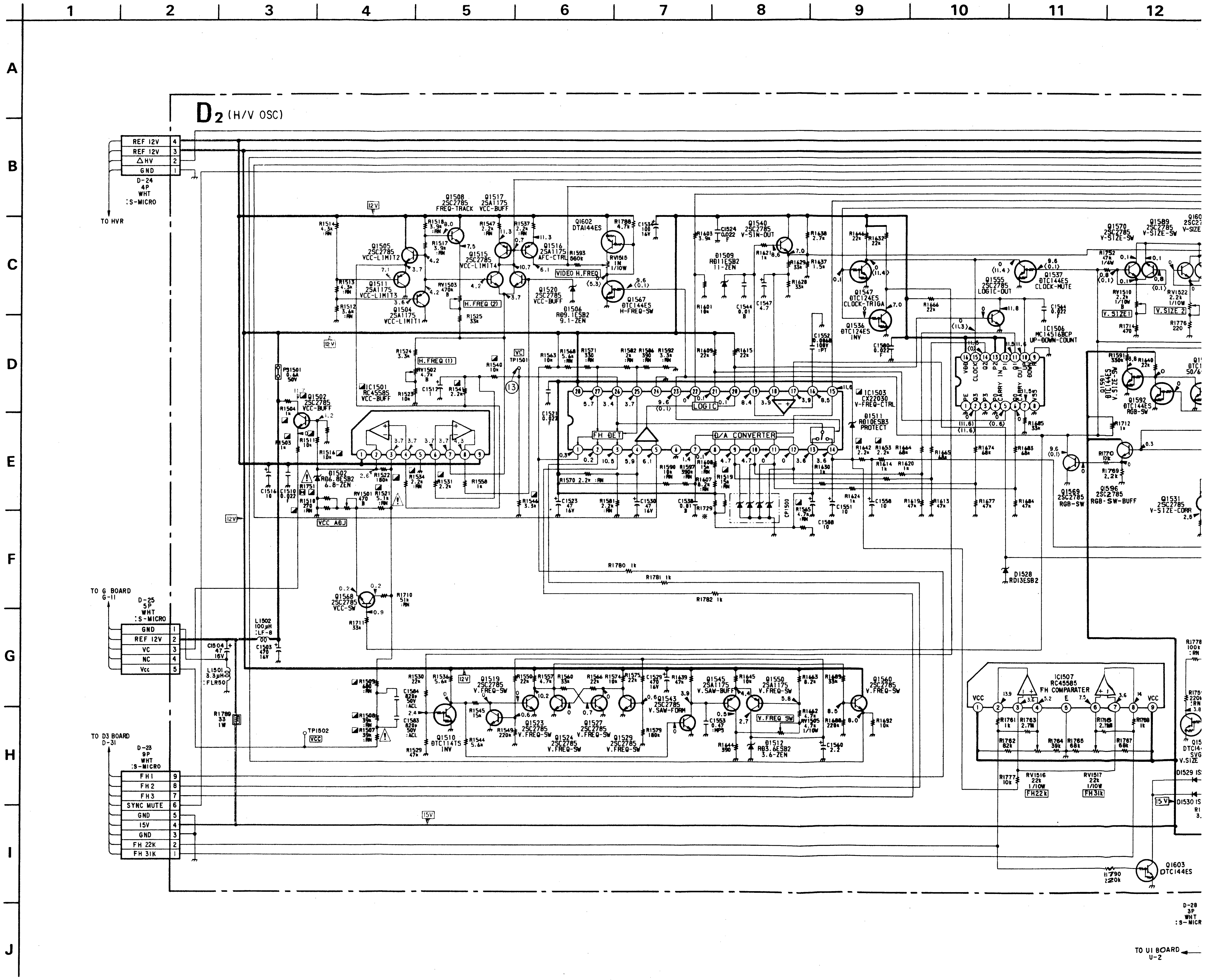
DIODE	
D505	E-4
D507	E-4
D508	D-7
D509	F-1
D510	D-5
D512	C-7
D513	C-4
D514	C-1
D515	B-5
D516	F-2
D518	A-3
D519	B-5
D520	E-7
D521	E-6
D522	C-1
D525	A-7
D526	F-3
D527	B-7
D528	B-7
D529	F-6
D530	E-5
D531	D-7

VARIABLE RESISTOR	
RV501	B-1
RV502	C-1
RV503	C-1
RV504	A-1
RV505	E-5

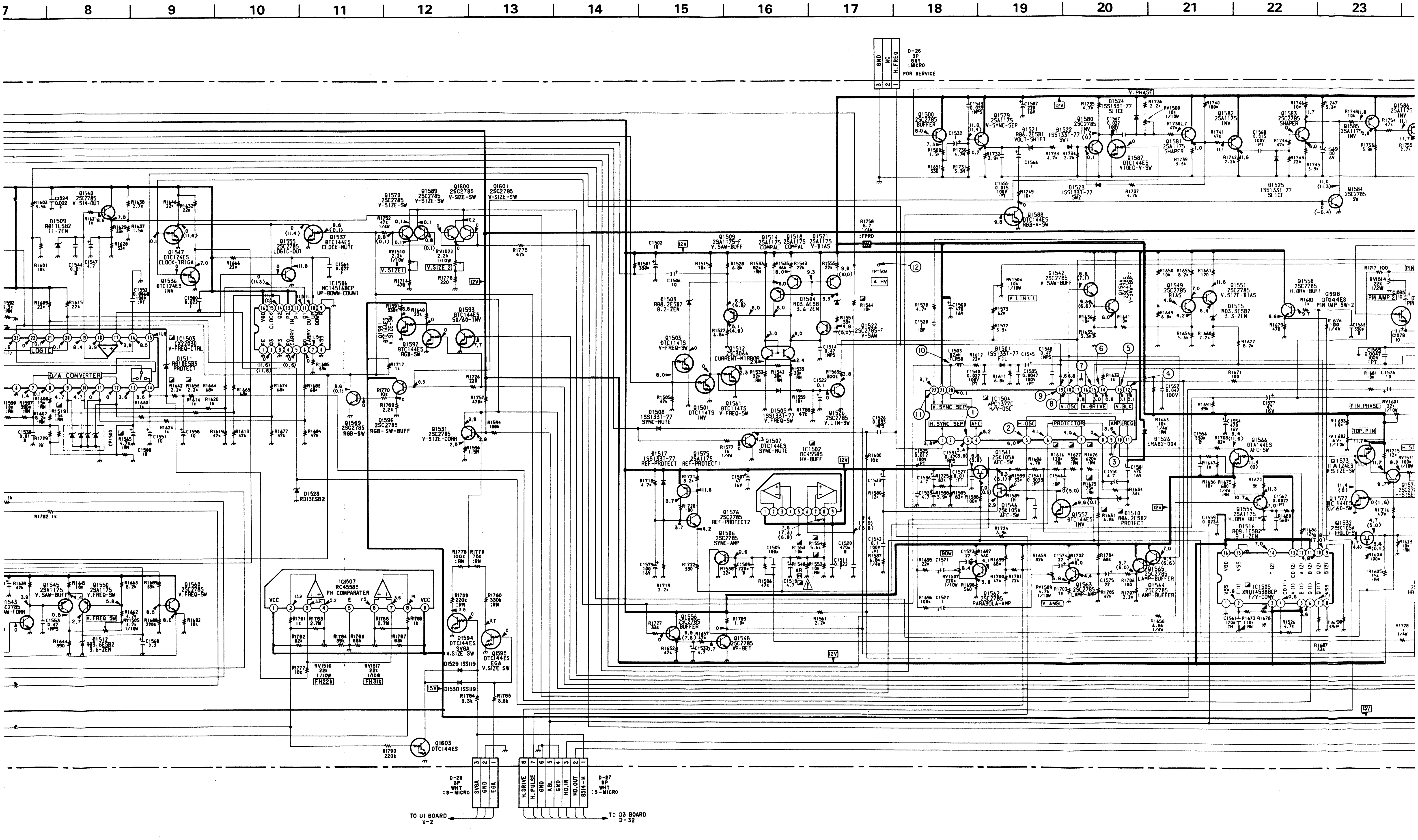
D2 BOARD

IC·NO.	PIN·NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC1502	⑥	7.4	7.2	7.2	7.2	7.2	6.8
	⑦	7.5	7.5	7.5	7.3	7.3	6.9
	⑧	7.5	7.5	7.5	7.3	7.3	6.9
IC1503	㉓	9.6	9.6	9.6	9.6	9.6	0.1
IC1504	③	4.0	4.0	3.4	3.4	3.4	3.9
	⑱	6.8	6.8	6.8	6.8	6.8	7.1
IC1505	②	8.0	7.8	7.8	7.8	7.8	7.8
	⑦	8.1	7.9	7.9	7.9	7.9	7.9
	⑨	7.0	7.0	6.8	6.8	6.8	7.0
IC1506	⑦	0	0	0	11.6	11.6	11.6
	⑤	0.1	0.1	0.1	0.1	0.1	0.6
	⑥	11.8	0	0	0	0	0
	⑭	11.5	11.5	11.5	11.5	11.5	0
	⑮	0	0	0	0	0	11.3

Q·NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q1509	B	6.0	6.0	6.0	6.0	6.0	6.1
	C	5.1	5.1	5.1	5.1	5.1	4.9
	E	6.6	6.6	6.6	6.6	6.6	6.8
Q1521	B	9.5	9.3	9.3	9.3	9.3	9.3
	C	9.5	9.3	9.3	9.2	9.3	9.3
	E	10.1	9.8	9.8	9.8	9.8	10.0
Q1522	B	4.8	4.6	4.8	4.8	4.8	5.0
	C						
	E	6.0	5.9	6.0	6.0	6.0	6.1
Q1532	D	4.8	4.6	4.7	4.7	4.7	5.0
	G	5.4	5.3	5.4	5.4	5.4	0.1
	S	4.8	4.6	4.7	4.7	4.7	4.4
Q1537	B	9.8	9.6	9.6	9.6	9.6	0.1
	C	0	0	0	0	0	11.4
	E						
Q1541	D	6.3	6.2	6.3	6.3	6.3	5.8
	G	7.0	6.9	7.0	6.9	6.9	0.1
	S	6.4	6.2	6.3	6.3	6.3	6.1
Q1542	B	7.0	6.8	6.8	6.8	6.8	7.1
	C						
	E	6.4	6.3	6.3	6.3	6.3	6.6
Q1547	B	0.1	0.1	0.1	0.1	0.1	0.2
	C	0	0	0	0	0	11.4
	E						
Q1556	B	0	0	0	0	0	0
	C						
	E	6.2	6.1	6.5	6.5	6.5	7.6
Q1557	B	9.8	9.6	9.6	9.6	9.6	0.1
	C	0	0	0	0	0	5.0
	E						
Q1564	B	6.5	6.4	6.4	6.3	6.3	6.6
	C						
	E	5.8	5.7	5.7	5.7	5.7	6.0
Q1566	B	0	0	11.4	11.4	11.4	0
	C	11.8	11.6	3.4	3.4	3.4	11.6
	E						
Q1567	B	9.6	9.6	9.6	9.6	9.6	0.1
	C	0	0	0	0	0	5.3
	E						
Q1569	B	0	0	0	0	0	6.7
	C	9.8	9.6	9.6	9.6	9.6	0.1
	E						
Q1570	B	0.8	0.8	0.8	0.8	0.8	0.1
	C	0.1	0.1	0.1	0.1	0.1	0.1
	E	0.1	0.1	0.1	0.1	0.1	0.1
Q1572	B	7.7	7.7	0	0	0	1.6
	C	0	0	11.4	11.4	11.4	0
	E						
Q1579	B	11.3	11.0	11.0	11.0	11.0	11.4
	C	0.1	0.1	0.2	0.2	0.2	0.2
	E						
Q1580	B	0.1	0.1	0.1	0.1	0.1	0.1
	C	11.6	11.2	11.2	11.2	11.2	0
	E						
Q1584	B	0	0	0	0	0	-0.4
	C	11.7	11.5	11.5	11.5	11.5	11.3
	E						



1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I J
D2 (H/V OSC)
REF 12V
ΔHV
GND
D-24 4P WHT :S-MICRO
TO HVR
TO G BOARD G-11
D-25 5P WHT :S-MICRO
VC
NC
Vcc
TO D3 BOARD D-31
D-23 9P WHT :S-MICRO
FH1
FH2
FH3
SYNC MUTE
15V
FH 22K
FH 31K
IC1501 RC4558S VCC-BUFF
IC1503 CX22030 V-FREQ-CTRL
IC1506 MC14516BCP UP-DOWN-COUNT
IC1507 RC4558S FH COMPARATER
LOGIC
FH DET
D/A CONVERTER
H.FREQ (1)
H.FREQ (2)
VIDEO H.FREQ
VCC ADJ
V.SIZE 1
V.SIZE 2
V.FREQ SW
FH22k
FH31k
TP1501
TP1502
Q1603 DTC144ES
D-28 3P WHT :S-MICRO
TO U1 BOARD U-2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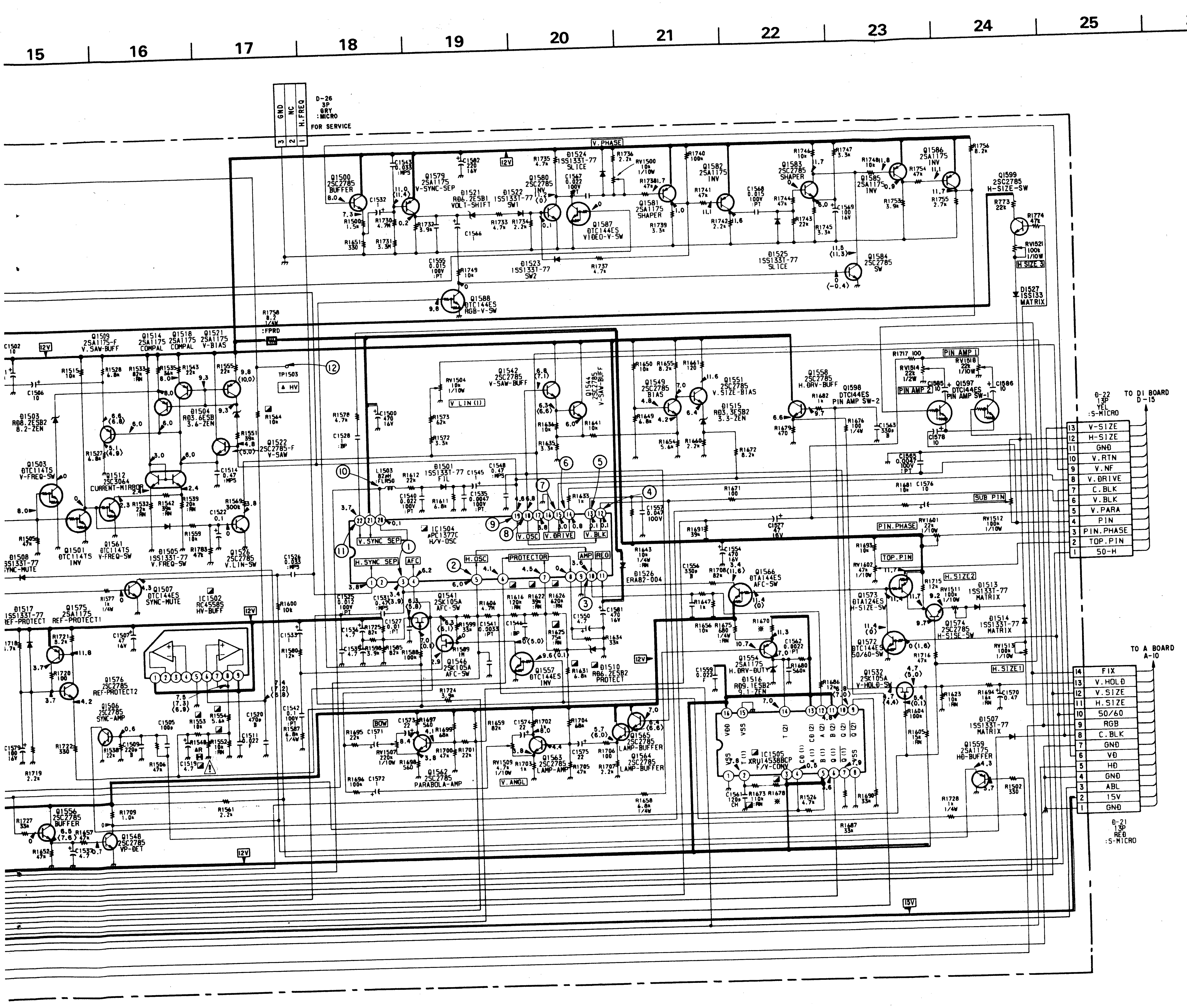
23
GND
NC
H.FREQ
D-26
3P
GRY
:MICRO
FOR SERVICE
V.PHASE
12V
Q1500 2SC2785 BUFFER
Q1579 2SA1175 V-SYNC-SEP
Q1521 RD6.2ESB1 VOLT-SHIFT
Q1522 1SS133T-77 SW1
Q1524 1SS133T-77 SLICE
Q1580 2SC2785 INV
Q1587 DTC144ES VIDEO-V-SW
Q1581 2SA1175 SHAPER
Q1582 2SA1175 INV
Q1583 2SC2785 SHAPER
Q1585 2SA1175 INV
Q1586 2SA1175 INV
Q1523 1SS133T-77 SW2
Q1525 1SS133T-77 SLICE
Q1584 2SC2785 SW
Q1588 DTC144ES RGB-V-SW
Q1540 2SC2785 V-SIN-OUT
Q1509 RD11ESB2 11-ZEN
Q1547 DTC124ES CLOCK-TRIGA
Q1536 DTC124ES INV
Q1555 DTC124ES LOGIC-OUT
Q1537 DTC144ES CLOCK-MUTE
IC1506 MC14516BCP UP-DOWN-COUNT
Q1570 2SC2785 V-SIZE-SW
Q1589 2SC2785 V-SIZE-SW
Q1600 2SC2785 V-SIZE-SW
Q1601 2SC2785 V-SIZE-SW
V.SIZE1
V.SIZE 2
IC1503 CX22030 V-FREQ-CTRL
Q1511 RD10ESB3 PROTECT
LOGIC
D/A CONVERTER
CP1500
Q1591 DTC144ES V.SIZE-SW
Q1592 DTC144ES RGB-SW
Q1593 DTC144ES 50/60-INV
Q1569 2SC2785 RGB-SW
Q1596 2SC2785 RGB-SW-BUFF
Q1531 2SC2785 V-SIZE-CORR
D1528 RD13ESB2
R1782 1k
Q1545 2SA1175 V.SAW-BUFF
Q1550 2SA1175 V.FREQ-SW
V.FREQ SW
Q1512 RD3.6ESB2 3.6-ZEN
Q1560 2SC2785 V.FREQ-SW
IC1507 RC4558S FH COMPARATER
VCC
FH22k
FH31k
Q1594 DTC144ES SVGA V.SIZE SW
Q1595 DTC144ES EGA V.SIZE SW
D1529 1SS119
D1530 1SS119
15V
Q1603 DTC144ES
SVGA
GND
EGA
D-28 3P WHT :S-MICRO
TO U1 BOARD U-2
H.DRIVE
H.PULSE
GND
ABL
GND
HD.IN
HD.OUT
8514-H
D-27 8P WHT :S-MICRO
TO D3 BOARD D-32
Q1509 2SA1175-F V.SAW-BUFF
Q1514 2SA1175 COMPAL
Q1518 2SA1175 COMPAL
Q1571 2SA1175 V-BIAS
Q1503 RD8.2ESB2 8.2-ZEN
Q1504 RD3.6ESB 3.6-ZEN
Q1512 2SC3064 CURRENT-MIRROR
Q1522 2SC2785-F V-SAW
Q1503 DTC114TS V-FREQ-SW
Q1501 DTC114TS INV
Q1561 DTC114TS V-FREQ-SW
Q1505 1SS133T-77 V.FREQ-SW
Q1526 2SC2785 V.LIN-SW
Q1508 1SS133T-77 SYNC-MUTE
TP1503
HV
:FPRD
Q1507 DTC144ES SYNC-MUTE
IC1502 RC4558S HV-BUFF
Q1517 1SS133T-77 REF-PROTECT
Q1575 2SA1175 REF-PROTECT1
Q1576 2SC2785 REF-PROTECT2
Q1506 2SC2785 SYNC-AMP
Q1556 2SC2785 BUFFER
Q1548 2SC2785 VP-DET
Q1542 2SC2785 V-SAW-BUFF
Q1544 2SC2785 V-SAW-BUFF
V LIN
Q1501 1SS133T-77 FIL
IC1504 μPC1377C H/V-OSC
V.SYNC SEP
H.SYNC SEP
AFC
H.OSC
PROTECTOR
AMP
REG
V.OSC
V.DRIVE
V.BLK
Q1541 2SK105A AFC-SW
Q1546 2SK105A AFC-SW
Q1557 DTC144ES INV
Q1510 RD6.2ESB2 PROTECT
Q1526 ERA82-004
Q1549 2SC2785 BIAS
Q1551 2SC2785 V.SIZE-BIAS
Q1515 RD3.3ESB2 3.3-ZEN
Q1558 2SC2785 H.DRV-BUFF
Q1598 DTC144ES PIN AMP SW-2
PIN AMP 2
PIN.PHASE
TOP.PIN
H.SIZE
Q1566 DTA144ES AFC-SW
Q1554 2SA1175 H.DRV-BUTY
Q1516 RD9.1ESB2 9.1 ZEN
Q1573 DTA124ES H SIZE-SW
Q1572 DTC144ES 50/60-SW
Q1532 2SC105A H-HOLD-SW
IC1505 XRU14538BCP F/V-CONV
BOW
Q1562 2SC2785 PARABOLA-AMP
Q1563 2SC2785 LAMP-AMP
Q1565 2SC2785 LAMP-BUFFER
Q1564 2SC2785 LAMP-BUFFER
V.ANGL


15
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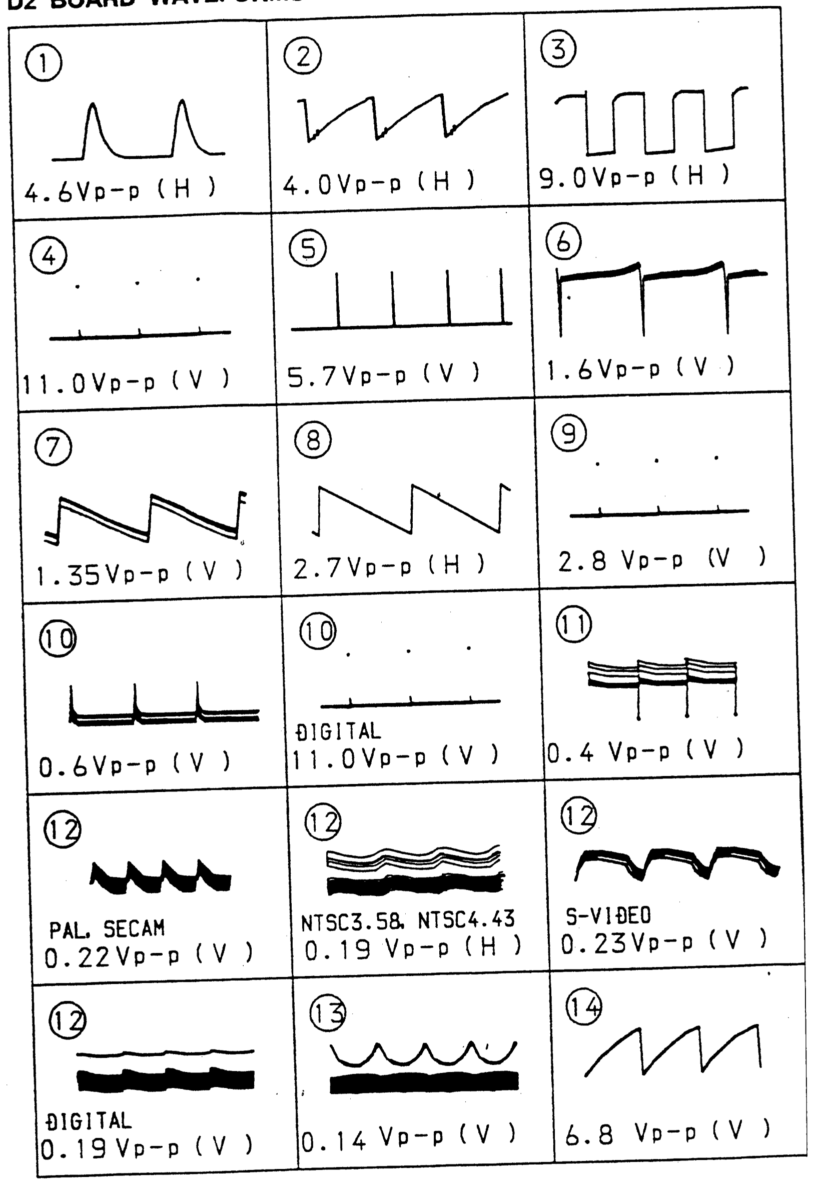
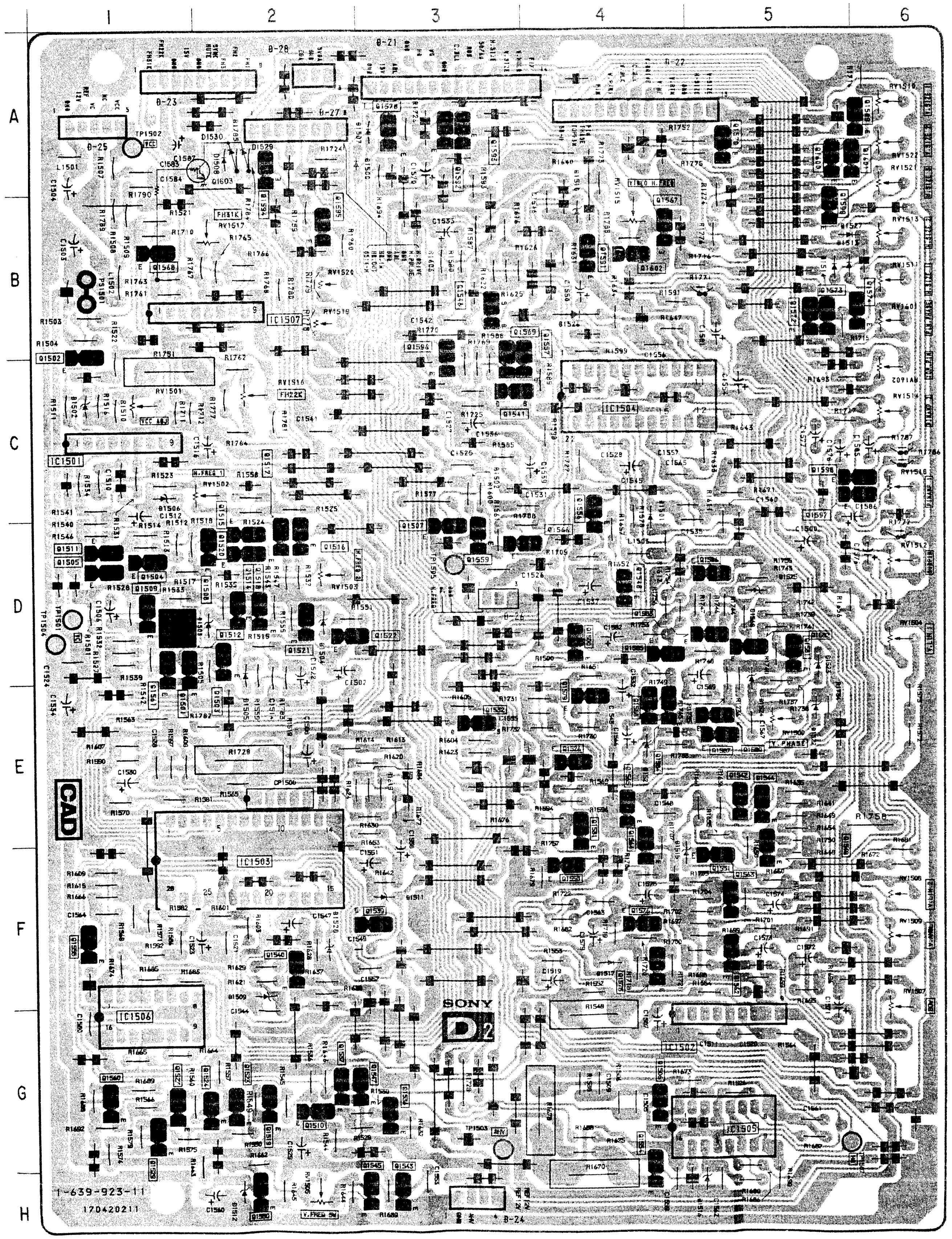
29
30
D-26
3P
GRY
:MICRO
FOR SERVICE
GND
NC
H.FREQ
V.PHASE
V.LIN (1)
H.SYNC SEP
AFC
H.OSC
PROTECTOR
AMP
REG
V.OSC
V.DRIVE
V.BLK
IC1504
μPC1377C
H/V-OSC
IC1502
RC4558S
HV-BUFF
IC1505
XRU14538BCP
F/V-CONV
BOW
V.ANGL
PIN AMP 1
PIN AMP 2
SUB PIN
PIN.PHASE
TOP.PIN
H.SIZE2
H.SIZE1
H.SIZE 3
12V
15V
D-22
13P
YEL
:S-MICRO
TO D1 BOARD
D-15
13 V-SIZE
12 H-SIZE
11 GND
10 V.RTN
9 V.NF
8 V.DRIVE
7 C.BLK
6 V.BLK
5 V.PARA
4 PIN
3 PIN.PHASE
2 TOP.PIN
1 50-H
TO A BOARD
A-10
14 FIX
13 V.HOLD
12 V.SIZE
11 H.SIZE
10 50/60
9 RGB
8 C.BLK
7 GND
6 VD
5 HD
4 GND
3 ABL
2 15V
1 GND
D-21
13P
RED
:S-MICRO

D2 BOARD WAVEFORMS



[H/V OSC] **D2** **D2**

-D2 Board-



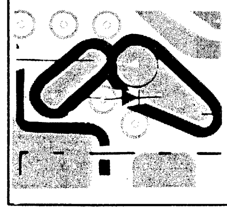
IC	
IC1501	C-1
IC1502	G-5
IC1503	F-2
IC1504	C-4
IC1505	G-5
IC1506	G-1
IC1507	B-2

TRANSISTOR	
Q1500	D-4
Q1501	D-1
Q1502	C-1
Q1503	D-2
Q1504	D-1
Q1505	D-1
Q1506	G-4
Q1507	D-3
Q1508	D-2
Q1509	D-1
Q1510	G-2
Q1511	D-1
Q1512	D-1
Q1514	D-2
Q1515	D-2
Q1516	D-2
Q1517	D-2
Q1518	D-2
Q1519	G-2
Q1520	D-2
Q1521	D-2
Q1522	D-2
Q1523	G-2
Q1524	G-2
Q1526	E-4
Q1527	G-1
Q1529	G-1
Q1531	E-4
Q1532	E-3
Q1536	G-3
Q1537	G-2
Q1540	F-2
Q1541	C-3
Q1542	E-5
Q1543	H-3
Q1544	E-5
Q1545	H-3
Q1546	B-3
Q1547	G-2
Q1548	D-4
Q1549	F-5
Q1550	H-2
Q1551	F-5
Q1554	G-4
Q1555	F-1
Q1556	C-4
Q1557	C-3
Q1558	F-4
Q1559	D-3
Q1560	G-1
Q1561	D-1
Q1562	F-5
Q1563	F-5
Q1564	E-4
Q1565	E-4
Q1566	D-3
Q1567	B-4
Q1568	B-1
Q1569	C-3
Q1570	A-5
Q1572	B-5
Q1573	B-5
Q1574	B-6
Q1575	F-4
Q1576	F-4
Q1579	E-4
Q1580	E-5
Q1581	D-5
Q1582	D-5
Q1583	D-5
Q1584	E-4
Q1585	D-4
Q1586	D-5
Q1587	E-5
Q1588	E-4
Q1589	A-6
Q1591	B-4
Q1592	A-3
Q1593	A-3
Q1594	A-2
Q1595	B-2
Q1596	B-3
Q1597	C-6
Q1598	C-6
Q1599	B-5
Q1600	A-5
Q1601	A-5
Q1602	B-4
Q1603	A-2

DIODE	
D1501	C-4
D1502	C-1
D1503	D-2
D1504	D-2
D1505	D-2
D1506	C-1
D1507	A-3
D1508	A-2
D1509	F-2
D1510	B-4
D1511	F-3
D1512	H-2
D1513	B-5
D1514	B-5
D1515	F-4
D1516	H-5
D1517	F-4
D1521	E-4
D1522	E-5
D1523	D-5
D1524	E-5
D1525	D-5
D1526	B-4
D1527	B-5
D1528	F-2
D1529	A-2
D1530	A-2

VARIABLE RESISTOR	
RV1500	E-5
RV1501	C-1
RV1502	C-2
RV1503	D-2
RV1504	D-6
RV1505	H-2
RV1507	F-6
RV1509	F-6
RV1510	A-6
RV1511	B-6
RV1512	D-6
RV1513	B-6
RV1514	C-6
RV1515	B-4
RV1516	C-2
RV1517	B-2
RV1518	C-6
RV1521	A-6
RV1522	A-6
RV1601	B-6
RV1602	C-6

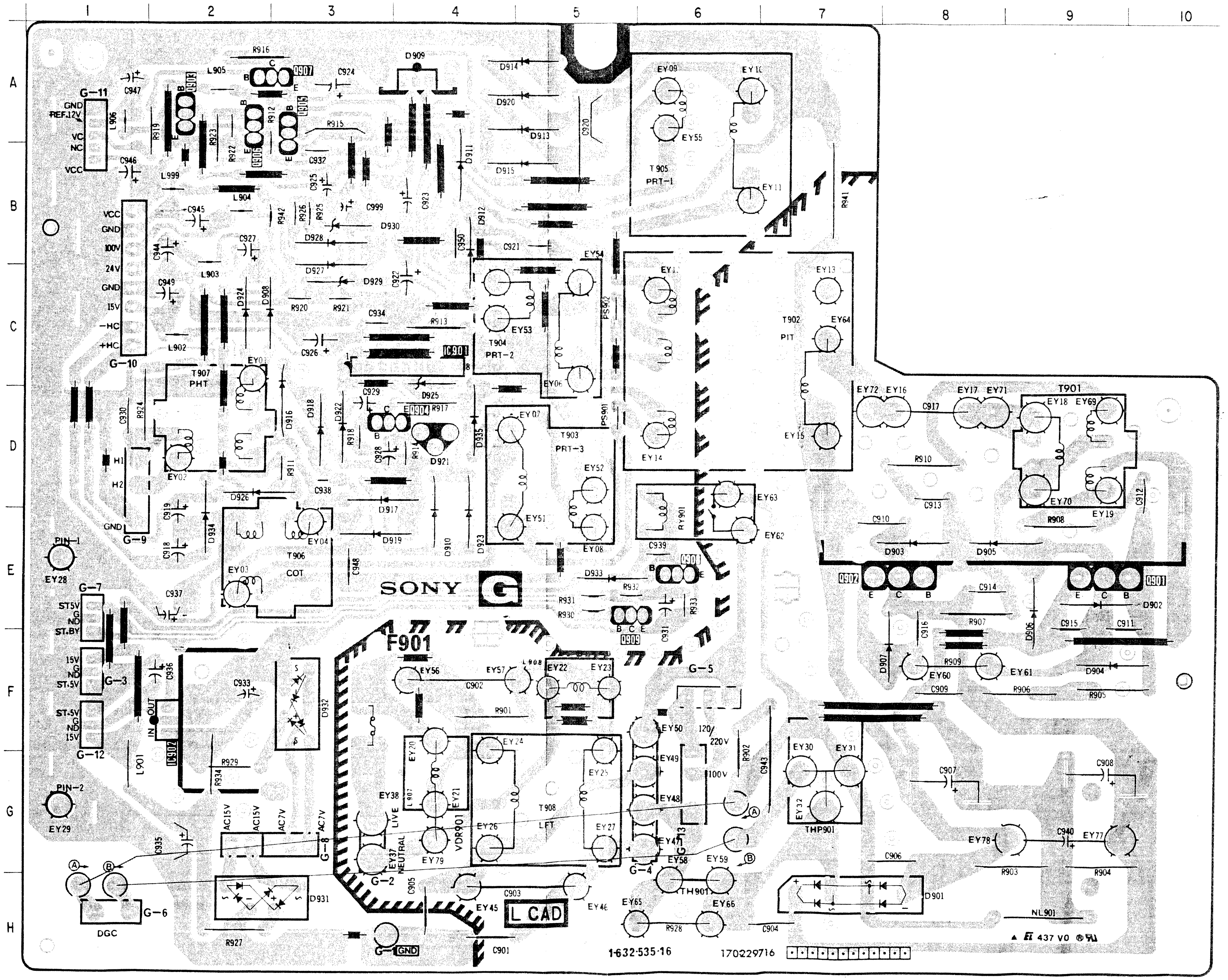
TP	
TP1501	D-1
TP1502	A-1
TP1503	G-3



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

[POWER SUPPLY] **G** **G**

-G Board-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A
B
C
D
E
F
G
H
G-11
GND
REF.12V
VC
NC
VCC
G-10
VCC
GND
100V
24V
GND
15V
-HC
+HC
G-9
H1
H2
GND
PIN-1
EY28
G-7
ST5V
G
ND
ST.BY
15V
G
ND
ST.5V
G-3
ST.5V
G
ND
15V
G-12
PIN-2
EY29
G-6
DGC
AC15V
AC15V
AC7V
AC7V
G-8
IN
OUT
IC902
T907
PHT
T906
COT
T905
PRT-1
T904
PRT-2
T903
PRT-3
T902
PIT
T901
T908
LFT
IC901
F901
SONY
G
LIVE
NEUTRAL
VDR901
THP901
TH901
RY901
PS901
PS902
NL901
120/
220V
100V
L CAD
G-2
G-4
G-5
G-13
GND
Q901
Q902
Q903
Q904
Q905
Q906
Q907
Q908
Q909
D901
D902
D904
D909
D931
D932
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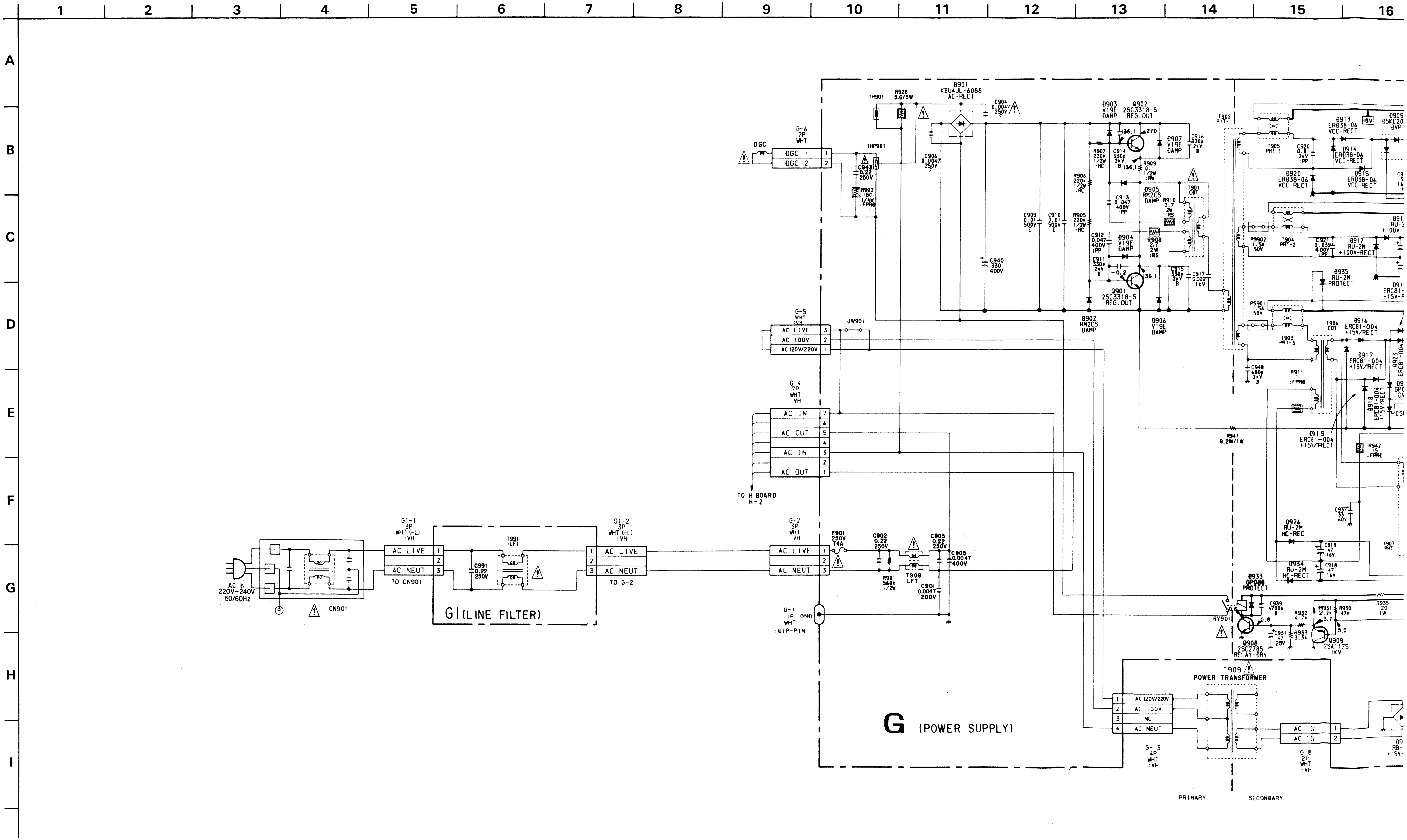
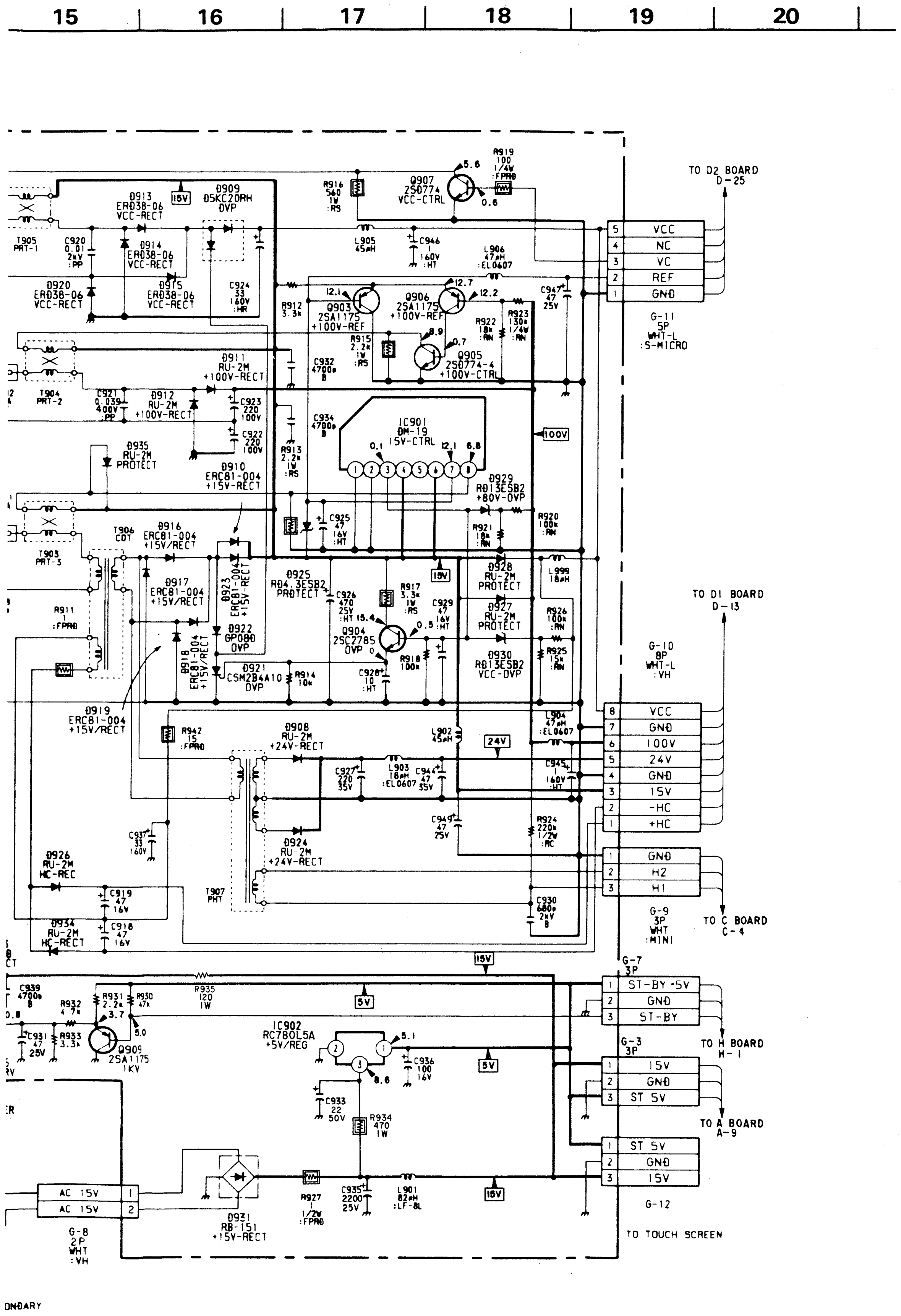
437 V0

IC	
IC901	C-4
IC902	F-2

TRANSISTOR	
Q901	E-9
Q902	E-8
Q903	A-2
Q904	D-3
Q905	A-3
Q906	A-2
Q907	A-3
Q908	E-6
Q909	E-5

DIODE	
D901	H-7
D902	E-9
D903	E-8
D904	F-9
D905	E-8
D906	E-9
D907	F-8
D908	C-2
D909	A-4
D910	E-4
D911	B-4
D912	B-4
D913	A-5
D914	A-5
D915	B-5
D916	D-3
D917	D-3
D918	D-3
D919	E-3
D920	A-5
D921	D-4
D922	D-3
D923	E-4
D924	C-2
D925	D-4
D926	D-2
D927	C-3
D928	B-3
D929	C-3
D930	B-3
D931	H-3
D932	F-3
D933	E-5
D934	E-2
D935	D-4

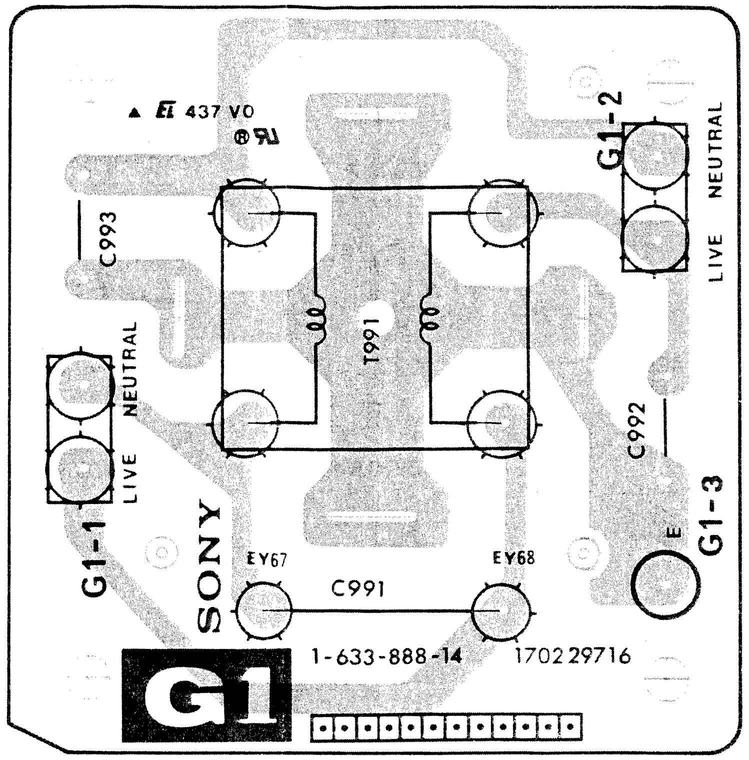

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
AC IN 220V-240V 50/60Hz
CN901
G1-1 3P WHT (-L) :VH
AC LIVE
AC NEUT
TO CN901
T991 :LFT
C991 0.22 250V
G1 (LINE FILTER)
G1-2 3P WHT (-L) :VH
TO G-2
G-2 3P WHT :VH
G-1 1P GND WHT :01P-PIN
F901 250V T4A
C902 0.22 250V
R901 560k 1/2W
T908 LFT
C903 0.22 250V
C905 0.0047 400V
C901 0.0047 200V
G-4 7P WHT :VH
AC IN
AC OUT
TO H BOARD H-2
G-5 WHT :VH
AC LIVE
AC 100V
AC 120V/220V
JW901
G-6 2P WHT
DGC
DGC 1
DGC 2
THP901
C943 0.22 250V
R902 180 1/4W :FPRD
TH901
R928 5.6/5W
D901 KBU4JL-6088 AC-RECT
C904 0.0047 250V
C906 0.0047 250V
C940 330 400V
C909 0.01 500V
C910 0.01 500V
R906 220k 1/2W :RC
R905 220k 1/2W :RC
D903 V19E DAMP
Q902 2SC3318-S REG.OUT
R907 220k 1/2W :RC
C914 330p 2kV
R909 0.1 1/2W :RW
D907 V19E DAMP
C916 330p 2kV
D905 RM2CS DAMP
C913 0.047 400V :PP
R910 2.7 2W :RS
T901 CDT
C912 0.047 400V :PP
D904 V19E DAMP
R908 2.7 2W :RS
C911 330p 2kV
C915 330p 2kV
C917 0.022 1kV
Q901 2SC3318-S REG.OUT
D902 RM2CS DAMP
D906 V19E DAMP
T902 PIT-1
T905 PRT-1
C920 0.01 2kV :PP
D913 ER038-06 VCC-RECT
D914 ER038-06 VCC-RECT
D920 ER038-06 VCC-RECT
D915 ER038-06 VCC-RECT
D909 05KC20 OVP
PS902 1.5A 50V
T904 PRT-2
C921 0.039 400V :PP
D912 RU-2M +100V-RECT
D935 RU-2M PROTECT
PS901 1.5A 50V
T903 PRT-3
T906 CDT
D916 ERC81-004 +15V/RECT
D917 ERC81-004 +15V/RECT
D918 ERC81-004 +15V/RECT
D919 ERC81-004 +15V/RECT
C948 680p 2kV
R911 :FPRB
R941 8.2M/1W
R942 15 :FPRD
C937 33 160V
D926 RU-2M HC-REC
C919 47 16V
D934 RU-2M HC-RECT
C918 47 16V
T907 PHT
D933 GP08D PROTECT
C939 4700p
RY901
R932 4.7k
R931 2.2k
R930 47k
R935 120 1W
Q908 2SC2785 RELAY DRV
C931 47 25V
R933 3.3k
Q909 2SA1175
G (POWER SUPPLY)
T909 POWER TRANSFORMER
AC 120V/220V
AC 100V
NC
AC NEUT
G-13 4P WHT :VH
AC 15V
G-8 2P WHT :VH
PRIMARY
SECONDARY


15
16
17
18
19
20
TO D2 BOARD
D-25
VCC
NC
VC
REF
GND
G-11
5P
WHT-L
:S-MICRO
Q907
2SD774
VCC-CTRL
R919
100
1/4W
:FPRB
R916
560
1W
:RS
D909
05KC20RH
OVP
15V
D913
ER038-06
VCC-RECT
T905
PRT-1
C920
0.01
2kV
:PP
D914
ER038-06
VCC-RECT
D920
ER038-06
VCC-RECT
D915
ER038-06
VCC-RECT
C924
33
160V
:HR
L905
45μH
C946
1
160V
:HT
L906
47μH
:EL0607
C947
47
25V
R912
3.3k
Q903
2SA1175
+100V-REF
Q906
2SA1175
+100V-REF
R915
2.2k
1W
:RS
Q905
2SD774-4
+100V-CTRL
R922
18k
:RN
R923
130k
1/4W
:RN
D911
RU-2M
+100V-RECT
C932
4700p
B
T904
PRT-2
C921
0.039
400V
:PP
D912
RU-2M
+100V-RECT
C923
220
100V
C922
220
100V
C934
4700p
B
IC901
DM-19
15V-CTRL
100V
D935
RU-2M
PROTECT
D910
ERC81-004
+15V-RECT
R913
2.2k
1W
:RS
D929
R013ESB2
+80V-OVP
R920
100k
:RN
T906
CDT
D916
ERC81-004
+15V/RECT
C925
47
16V
:HT
R921
18k
:RN
T903
PRT-3
D917
ERC81-004
+15V/RECT
D923
ERC81-004
+15V-RECT
D925
R04.3ESB2
PROTECT
C926
470
25V
:HT
R917
3.3k
1W
:RS
C929
47
16V
:HT
15V
D928
RU-2M
PROTECT
L999
18μH
R911
1
:FPRB
D922
GP08D
OVP
Q904
2SC2785
OVP
D927
RU-2M
PROTECT
R926
100k
:RN
R925
15k
:RN
TO D1 BOARD
D-13
D918
ERC81-004
+15V/RECT
D921
CSM2B4A10
OVP
R914
10k
C928
10
:HT
R918
100k
D930
R013ESB2
VCC-OVP
G-10
8P
WHT-L
:VH
D919
ERC81-004
+15V/RECT
R942
15
:FPRB
D908
RU-2M
+24V-RECT
L902
45μH
24V
L904
47μH
:EL0607
VCC
GND
100V
24V
GND
15V
-HC
+HC
C927
220
35V
L903
18μH
:EL0607
C944
47
35V
C945
1
160V
:HT
C949
47
25V
R924
220k
1/2W
:RC
C937
33
160V
D924
RU-2M
+24V-RECT
D926
RU-2M
HC-REC
C919
47
16V
T907
PHT
C930
680p
2kV
B
GND
H2
H1
G-9
3P
WHT
:MINI
TO C BOARD
C-4
D934
RU-2M
HC-RECT
C918
47
16V
15V
G-7
3P
C939
4700p
B
R932
4.7k
R931
2.2k
R930
47k
R935
120
1W
5V
ST-BY-5V
GND
ST-BY
TO H BOARD
H-1
IC902
RC78L05A
+5V/REG
C931
47
25V
R933
3.3k
Q909
2SA1175
1KV
C936
100
16V
5V
G-3
3P
15V
GND
ST 5V
TO A BOARD
A-9
C933
22
50V
R934
470
1W
ST 5V
GND
15V
AC 15V
AC 15V
G-8
2P
WHT
:VH
D931
RB-151
+15V-RECT
R927
1
1/2W
:FPRB
C935
2200
25V
L901
82μH
:LF-8L
15V
G-12
TO TOUCH SCREEN
ONDARY

G1

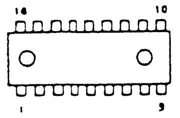
G1 [LINE FILTER]

—G1 Board—

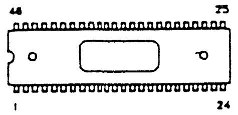

EI 437 VO
C993
G1-2
NEUTRAL
LIVE
T991
NEUTRAL
LIVE
C992
G1-3
E
G1-1
SONY
EY67
EY68
C991
1-633-888-14
170229716
G1

5-5. SEMICONDUCTORS

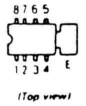
CXA1044BP



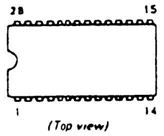
CXA1213S



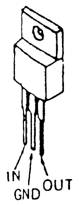
CXK1011P


8 7 6 5
1 2 3 4
E
(Top view)

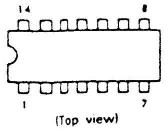
CX22030


28
15
1
14
(Top view)

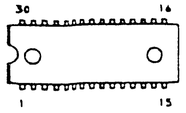
LM7812C7
RC7805FA



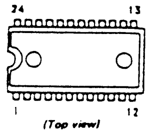
MC1495L


14
8
1
7
(Top view)

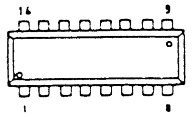
M52001SP



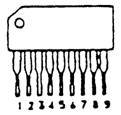
M54480P


24
13
1
12
(Top view)

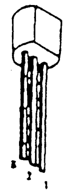
NJM2234L



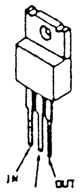
RC4558S



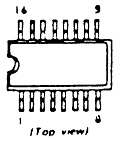
RC78L05A
RC78L12A



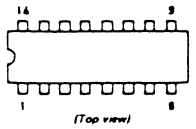
RC7809FA



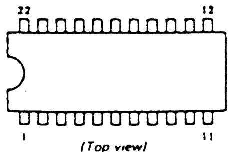
SN74LS157NS


16
9
1
8
(Top view)

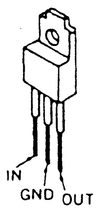
SN74LS365ANS
TC4516BP
UPD6326C


16
9
1
8
(Top view)

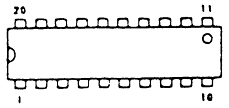
μPC1377C


22
12
1
11
(Top view)

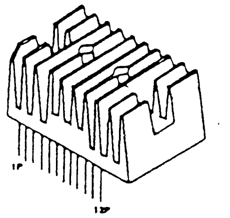
μPC2405HF



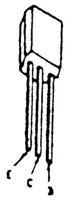
μPD7564CS-094



VPM03F



DTA114ES
DTA114TS
DTA124ES
DTA144ES
DTC114ES
DTC124ES
DTC144ES
XDC144ES



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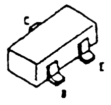
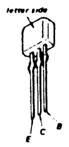
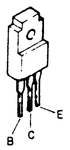
DTC144EK
2SA1162-YG
2SC2712-YG



DTC114TS
2SA1175-HFE
2SC2785-HFE


letter side
E
C
B

K91-044



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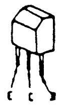
2SD774-34
2SD774-44



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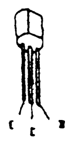

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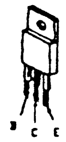
2SD1264-P



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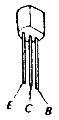

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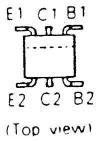
E1 C1 B1
E2 C2 B2
(Top view)

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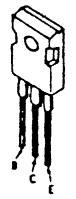

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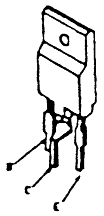
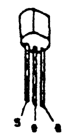


2SK105A-30



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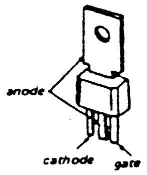
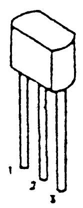
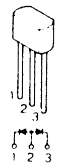

anode
cathode
gate

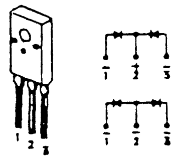
DAN209S



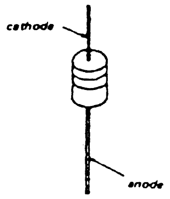
DAP209S



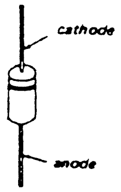
D5KC20RH



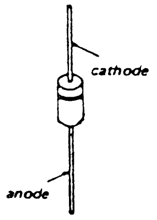
ERA82-004
K91-030
MTZJ-13
MTZJ-5.1A
RD10ES-B3
RD13ES-B2
RD18ES-B1
RD24ES-B
RD3.3ES-B2
RD3.6ES-B1
RD3.6ES-B2
RD3.6ESL1
RD4.3ES-B2
RD5.6ES-B2
RD5.6ES-B3
RD6.2ES-B1
RD6.2ES-B2
RD6.8ES-B2
RD8.2ES-B1
RD8.2ES-B2
RD9.1ES-B2
1SS119


cathode
anode

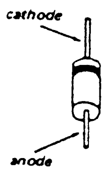
ERC38-06
K91-024
RGP02-17


cathode
anode

ERC81-004
FE3D
RM2CS
RU-3AM


cathode
anode

ERD09-15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anode

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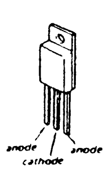
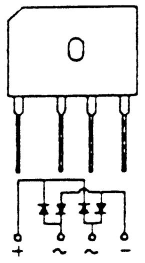
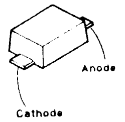

anode
cathode
anode

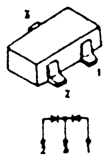
KBU4JL-6088



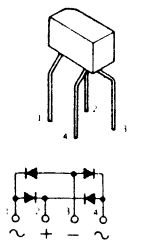
MA110


Anode
Cathode

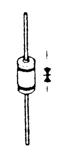
MA152WK



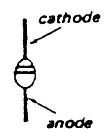
RB-151LF3



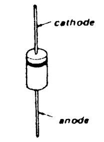
RD9.1EW



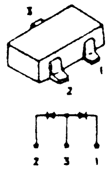
U05G
V19C


cathode
anode

WG713A-T265


cathode
anode

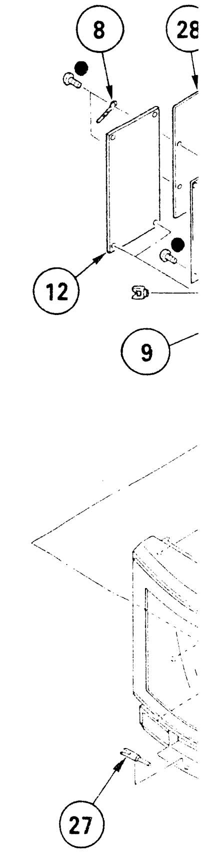
1S2836



NOTE:
- Items with no par
  cription are not
  are seldom requir
- The construction
  part are indicat
  number in the rem
- Items marked " ★
  they are seldom
  service. Some del
  when ordering the

6-1. CHASSIS

● : BVTP3×8 7
△ : BVTP3×12 7
○ : BVTP4×8 7



REF.NO.	PART NO.
1	*A-1135-70
2	*A-1375-10
3	4-397-106-
4	*1-633-816-
5	*1-568-507-
6	*A-1296-93
7	*A-1335-02
8	*3-701-822-
9	*4-353-620-
10	*3-703-141-
11	*4-884-992-
12	*A-1335-02
13	⚠1-230-666-
14	4-397-115-
15	1-537-207-
16	*A-1394-35
17	4-369-627-

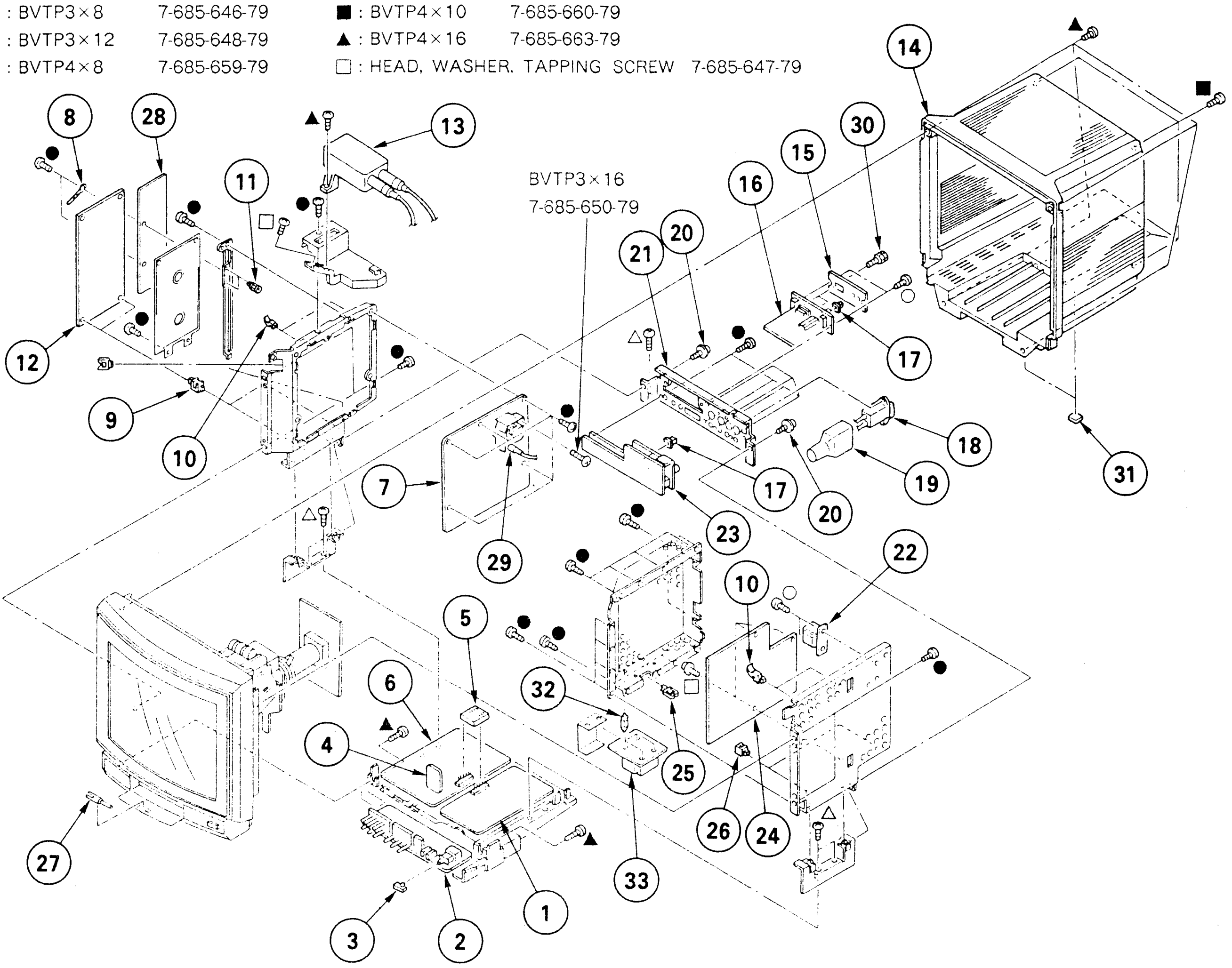
SECTION 6
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS

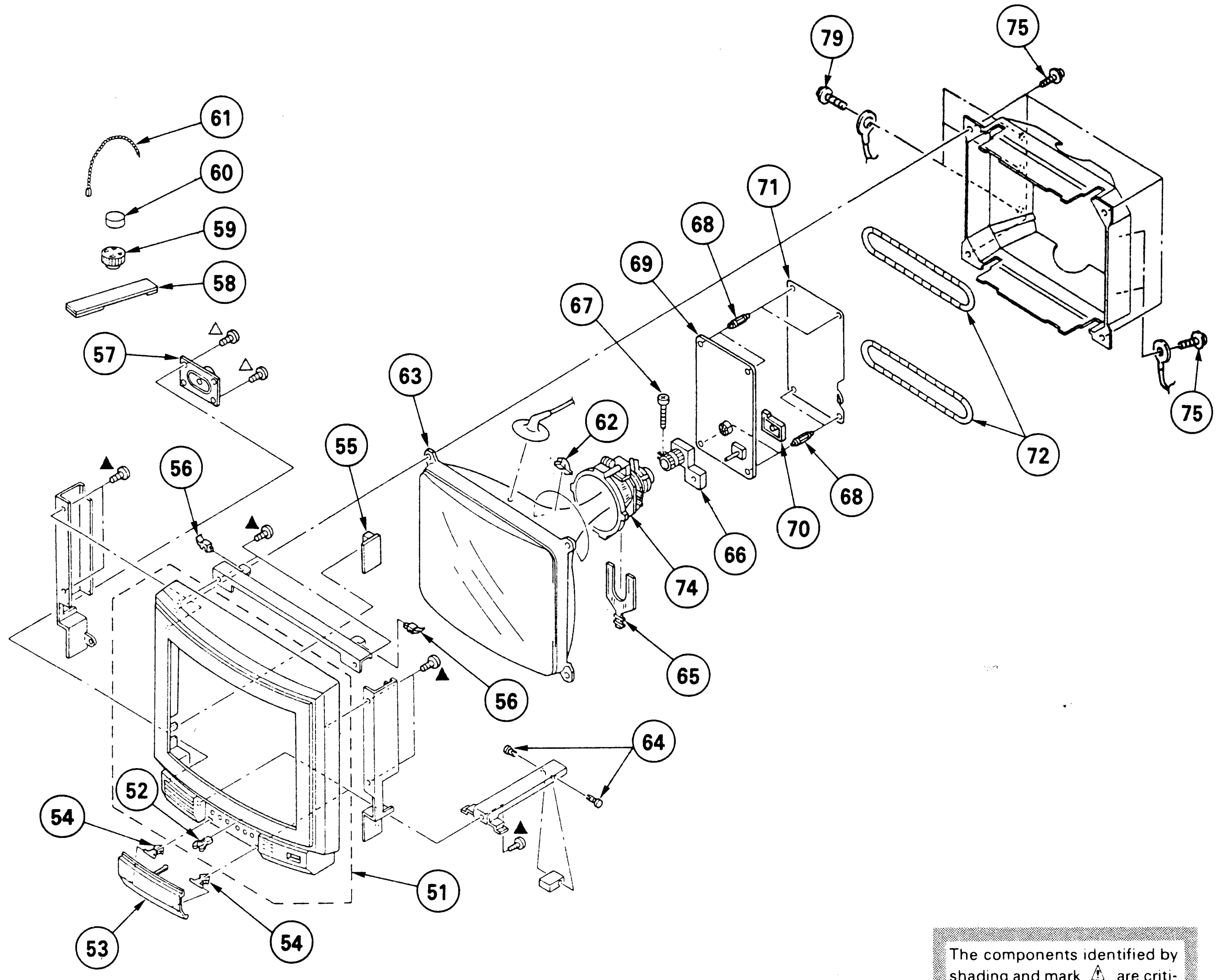
● : BVTP3×8 7-685-646-79
△ : BVTP3×12 7-685-648-79
○ : BVTP4×8 7-685-659-79
■ : BVTP4×10 7-685-660-79
▲ : BVTP4×16 7-685-663-79
□ : HEAD, WASHER, TAPPING SCREW 7-685-647-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1135-703-A	B BOARD, COMPLETE	
2	*A-1375-106-A	H BOARD, COMPLETE	
3	4-397-106-01	BUTTON, POWER	
4	*1-633-816-21	AB BOARD	
5	*1-568-507-11	CONNECTOR, BRIDGE 15P	
6	*A-1296-936-A	A BOARD, COMPLETE	2,4,55
7	*A-1335-023-A	D1 BOARD, COMPLETE	
8	*3-701-822-00	HOLDER, WIRE	
9	*4-353-620-02	HINGE, PC BOARD	
10	*3-703-141-00	HOLDER, PCB	
11	*4-884-992-00	SUPPORT, PC	
12	*A-1335-024-A	D2 BOARD, COMPLETE	
13	⚠1-230-666-41	RESISTOR ASS'Y, HIGH-VOLTAGE	
14	4-397-115-11	COVER, REAR	
15	1-537-207-21	TERMINAL BOARD ASS'Y, U	
16	*A-1394-350-A	U1 BOARD, COMPLETE	
17	4-369-627-01	PUSH BUTTON	
18	⚠1-526-954-11	INLET, AC	
19	*4-601-466-00	COVER, 3P INLET	
20	4-382-854-01	SCREW (M3X8), P, SW (+)	
21	4-397-114-01	TERMINAL BOARD	
22	⚠1-450-773-11	TRANSFORMER, POWER	
23	*1-632-539-11	Q BOARD	
24	*A-1316-098-E	G BOARD, COMPLETE	
25	⚠4-343-123-02	RETAINER, AC CORD	
26	*3-701-903-11	HOLDER, PC BOARD	
27	4-029-223-01	DRIVER, SCREW	
28	*A-1341-431-B	D3 BOARD, COMPLETE	
29	1-439-390-11	TRANSFORMER ASS'Y, FLYBACK (NX-2100)	
30	4-031-973-01	LOCK, SCREW	
31	4-033-318-01	CUSHION, FOOT	
32	*3-682-419-11	HOLDER, P.C.B	
33	*1-633-888-11	G1 BOARD	

6-2. PICTURE TUBE

△ : BVTP3×12 7-685-648-79
▲ : BVTP4×16 7-685-663-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4397-104-3	BEZEL ASS'Y	52
52	4-392-036-01	CATCHER, PUSH	
53	X-4397-103-4	DOOR ASS'Y	
54	3-703-035-11	SHAFT, DOOR	
55	*1-632-534-21	E BOARD	
56	*3-703-141-00	HOLDER, PCB	
57	1-544-252-11	SPEAKER	
58	X-4309-608-0	PERMALLOY ASS'Y, CONVERGENCE	
59	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMϕ	
60	1-452-032-00	MAGNET,DISC	
61	4-308-870-00	CLIP, LEAD WIRE	
62	3-703-961-01	SPACER, DY	
63	⚠8-738-259-01	PICTURE TUBE 14FGE (SD-242)	
64	4-812-134-00	RIVET NYLON, 3.5	
65	X-2105-485-1	PLATE ASS'Y, CORRECTION, TLH	
66	X-4392-701-1	HOLDER ASS'Y, B PC BOARD	67
67	*2-101-802-01	SCREW, FASTENING, SEPARATOR	
68	*3-682-419-01	HOLDER, P.C.B	
69	*A-1331-040-A	C BOARD, COMPLETE	
70	*4-392-704-01	COVER, H.STAT	
71	*4-397-123-01	PLATE, SHIELD, C	
72	⚠1-426-442-21	COIL, DEMAGNETIZATION	
73	4-307-249-00	SCREW (5), TAPPING	
74	⚠1-451-384-21	DEFLECTION YOKE (Y14FGC3)	
75	4-389-025-01	SCREW (M4X8)(EXT TOOTH WASHER)	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- ✱ : Selected to yield optimum performance.
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1135-703-A	B BOARD, COMPLETE *****************			
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
	*1-564-507-11	PLUG, CONNECTOR 4P			
	*1-568-371-11	PIN, CONNECTOR (PC BOARD) 15P			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
		<CAPACITOR>			
C001	1-124-477-11	ELECT	47MF	20%	16V
C002	1-124-477-11	ELECT	47MF	20%	16V
C003	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C004	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C005	1-124-477-11	ELECT	47MF	20%	16V
C007	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C008	1-124-477-11	ELECT	47MF	20%	16V
C009	1-124-477-11	ELECT	47MF	20%	16V
C011	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C012	1-124-477-11	ELECT	47MF	20%	16V
C013	1-164-097-11	CERAMIC	0.022MF		50V
C014	1-164-097-11	CERAMIC	0.022MF		50V
C015	1-124-477-11	ELECT	47MF	20%	16V
C016	1-124-477-11	ELECT	47MF	20%	16V
C017	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C018	1-124-903-11	ELECT	1MF	20%	50V
C019	1-164-097-11	CERAMIC	0.022MF		50V
C020	1-164-083-11	CERAMIC	680PF	10%	50V
C021	1-124-477-11	ELECT	47MF	20%	16V
C022	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C023	1-124-477-11	ELECT	47MF	20%	16V
C024	1-164-064-11	CERAMIC	56PF	5%	50V
C025	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C026	1-124-907-11	ELECT	10MF	20%	50V
C027	1-124-120-11	ELECT	220MF	20%	16V
C028	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C029	1-136-169-00	FILM	0.22MF	5%	50V
C030	1-124-477-11	ELECT	47MF	20%	16V
C031	1-126-233-11	ELECT	22MF	20%	50V
C032	1-126-101-11	ELECT	100MF	20%	16V
C033	1-130-479-00	MYLAR	0.0047MF	10%	50V
C034	1-102-816-00	CERAMIC	120PF	5%	50V
C035	1-136-169-00	FILM	0.22MF	5%	50V
C036	1-102-973-00	CERAMIC	100PF	5%	50V
C037	1-130-475-00	MYLAR	0.0022MF	5%	50V
C038	1-124-477-11	ELECT	47MF	20%	16V
C039	1-164-097-11	CERAMIC	0.022MF		50V
C040	1-136-165-00	FILM	0.1MF	5%	50V
C041	1-164-097-11	CERAMIC	0.022MF		50V
C042	1-101-890-00	CERAMIC	75PF	5%	50V
C043	1-136-169-00	FILM	0.22MF	5%	50V
C044	1-136-165-00	FILM	0.1MF	5%	50V
C045	1-102-959-00	CERAMIC	22PF	5%	50V
C046	1-101-890-00	CERAMIC	75PF	5%	50V
C047	1-136-169-00	FILM	0.22MF	5%	50V
C048	1-136-169-00	FILM	0.22MF	5%	50V
C049	1-102-961-00	CERAMIC	27PF	5%	50V
C050	1-136-165-00	FILM	0.1MF	5%	50V
C051	1-136-173-00	FILM	0.47MF	5%	50V
C052	1-102-816-00	CERAMIC	120PF	5%	50V
C053	1-164-085-11	CERAMIC	0.001MF	10%	50V
C054	1-130-491-00	MYLAR	0.047MF	5%	50V
C055	1-102-816-00	CERAMIC	120PF	5%	50V
C056	1-136-167-00	FILM	0.15MF	5%	50V
C057	1-130-487-00	MYLAR	0.022MF	5%	50V
C058	1-124-903-11	ELECT	1MF	20%	50V
C059	1-124-927-11	ELECT	4.7MF	20%	50V
C060	1-124-477-11	ELECT	47MF	20%	16V
C061	1-130-480-00	MYLAR	0.0056MF	10%	50V
C062	1-136-165-00	FILM	0.1MF	5%	50V
C063	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C064	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C065	1-126-101-11	ELECT	100MF	20%	16V
C066	1-106-361-00	MYLAR	0.0056MF	10%	100V
C067	1-164-097-11	CERAMIC	0.022MF		50V
C068	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C075	1-124-477-11	ELECT	47MF	20%	16V
C077	1-164-077-11	CERAMIC	220PF	10%	50V
		<TRIMMER>			
CV358	1-141-245-00	CAP, TRIMMER			
CV443	1-141-245-00	CAP, TRIMMER			
		<DIODE>			
D001	8-719-911-19	DIODE 1SS119			
D002	8-719-911-19	DIODE 1SS119			
D003	8-719-911-19	DIODE 1SS119			
D004	8-719-911-19	DIODE 1SS119			
D005	8-719-911-19	DIODE 1SS119			
D006	8-719-911-19	DIODE 1SS119			
D007	8-719-911-19	DIODE 1SS119			
D008	8-719-911-19	DIODE 1SS119			
		<DELAY LINE>			
DL001	1-415-632-11	DELAY LINE, Y			
DL002	1-415-122-31	DELAY LINE, 1H (PAL)			
		<FILTER>			
FL001	1-236-640-11	MODULE, TRAP			

B

REF.NO.	PART NO.	DESCRIPTION				REMARK
FL003	1-466-162-31	BLOCK, COM FILTER (CFB-4)				
FL005	1-236-364-11	FILTER, BAND PASS				
		<IC>				
IC001	8-759-711-23	IC NJM2234L				
IC002	8-759-711-23	IC NJM2234L				
IC003	8-759-711-23	IC NJM2234L				
IC004	8-759-711-23	IC NJM2234L				
IC006	8-759-982-10	IC RC7809FA				
IC007	8-752-036-21	IC CXA1213S				
IC008	8-752-056-67	IC CXA1214P				
		<COIL>				
L002	1-410-506-11	INDUCTOR	5.6UH			
L003	1-408-411-00	INDUCTOR	15UH			
L004	1-408-411-00	INDUCTOR	15UH			
L005	1-407-496-00	INDUCTOR	2.2MMH			
L006	1-410-513-11	INDUCTOR	22UH			
L007	1-404-584-11	COIL				
L008	1-404-496-00	COIL				
L009	1-404-496-00	COIL				
L010	1-410-507-11	INDUCTOR	6.8UH			
		<TRANSISTOR>				
Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q003	8-729-900-89	TRANSISTOR DTC144ES				
Q004	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q005	8-729-900-89	TRANSISTOR DTC144ES				
Q006	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q007	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q010	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q011	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q012	8-729-900-89	TRANSISTOR DTC144ES				
Q013	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q014	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q015	8-729-900-89	TRANSISTOR DTC144ES				
Q016	8-729-900-89	TRANSISTOR DTC144ES				
Q017	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q018	8-729-900-89	TRANSISTOR DTC144ES				
Q019	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q020	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q021	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q022	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q023	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q024	8-729-900-89	TRANSISTOR DTC144ES				
		<RESISTOR>				
R001	1-249-405-11	CARBON	100	5%	1/4W	
R002	1-249-417-11	CARBON	1K	5%	1/4W	
R003	1-249-417-11	CARBON	1K	5%	1/4W	
R004	1-249-399-11	CARBON	33	5%	1/4W	
R005	1-249-405-11	CARBON	100	5%	1/4W	
R006	1-249-409-11	CARBON	220	5%	1/4W	
R007	1-249-421-11	CARBON	2.2K	5%	1/4W	
R008	1-249-421-11	CARBON	2.2K	5%	1/4W	
R011	1-249-431-11	CARBON	15K	5%	1/4W	
R015	1-249-437-11	CARBON	47K	5%	1/4W	
R017	1-249-429-11	CARBON	10K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R018	1-249-405-11	CARBON	100	5%	1/4W	
R019	1-249-417-11	CARBON	1K	5%	1/4W	
R020	1-249-431-11	CARBON	15K	5%	1/4W	
R021	1-249-431-11	CARBON	15K	5%	1/4W	
R022	1-249-435-11	CARBON	33K	5%	1/4W	
R023	1-249-427-11	CARBON	6.8K	5%	1/4W	
R024	1-249-430-11	CARBON	12K	5%	1/4W	
R025	1-249-408-11	CARBON	180	5%	1/4W	
R026	1-249-411-11	CARBON	330	5%	1/4W	
R027	1-249-433-11	CARBON	22K	5%	1/4W	
R028	1-249-435-11	CARBON	33K	5%	1/4W	
R029	1-249-419-11	CARBON	1.5K	5%	1/4W	
R030	1-249-411-11	CARBON	330	5%	1/4W	
R031	1-249-415-11	CARBON	680	5%	1/4W	
R032	1-249-411-11	CARBON	330	5%	1/4W	
R033	1-249-417-11	CARBON	1K	5%	1/4W	
R034	1-249-421-11	CARBON	2.2K	5%	1/4W	
R035	1-249-429-11	CARBON	10K	5%	1/4W	
R036	1-249-441-11	CARBON	100K	5%	1/4W	
R037	1-249-411-11	CARBON	330	5%	1/4W	
R038	1-249-417-11	CARBON	1K	5%	1/4W	
R039	1-249-416-11	CARBON	820	5%	1/4W	
R040	1-249-416-11	CARBON	820	5%	1/4W	
R041	1-249-415-11	CARBON	680	5%	1/4W	
R042	1-249-405-11	CARBON	100	5%	1/4W	
R043	1-249-435-11	CARBON	33K	5%	1/4W	
R044	1-249-415-11	CARBON	680	5%	1/4W	
R045	1-249-419-11	CARBON	1.5K	5%	1/4W	
R046	1-249-420-11	CARBON	1.8K	5%	1/4W	
R047	1-249-405-11	CARBON	100	5%	1/4W	
R048	1-249-408-11	CARBON	180	5%	1/4W	
R049	1-249-412-11	CARBON	390	5%	1/4W	
R050	1-249-413-11	CARBON	470	5%	1/4W	
R051	1-249-417-11	CARBON	1K	5%	1/4W	
R052	1-249-417-11	CARBON	1K	5%	1/4W	
R053	1-249-419-11	CARBON	1.5K	5%	1/4W	
R054	1-215-432-00	METAL	3K	1%	1/4W	
R055	1-249-437-11	CARBON	47K	5%	1/4W	
R056	1-249-410-11	CARBON	270	5%	1/4W	
R057	1-247-903-00	CARBON	1M	5%	1/4W	
R058	1-249-429-11	CARBON	10K	5%	1/4W	
R059	1-249-423-11	CARBON	3.3K	5%	1/4W	
R060	1-249-419-11	CARBON	1.5K	5%	1/4W	
R061	1-249-422-11	CARBON	2.7K	5%	1/4W	
R062	1-249-419-11	CARBON	1.5K	5%	1/4W	
R063	1-249-419-11	CARBON	1.5K	5%	1/4W	
R064	1-249-412-11	CARBON	390	5%	1/4W	
R065	1-249-412-11	CARBON	390	5%	1/4W	
R066	1-249-410-11	CARBON	270	5%	1/4W	
R067	1-249-408-11	CARBON	180	5%	1/4W	
R068	1-249-410-11	CARBON	270	5%	1/4W	
R069	1-249-421-11	CARBON	2.2K	5%	1/4W	
R070	1-249-425-11	CARBON	4.7K	5%	1/4W	
R071	1-249-413-11	CARBON	470	5%	1/4W	
R072	1-247-891-00	CARBON	330K	5%	1/4W	
R073	1-249-417-11	CARBON	1K	5%	1/4W	
R074	1-249-429-11	CARBON	10K	5%	1/4W	
R075	1-215-455-00	METAL	27K	1%	1/4W	
R076	1-249-409-11	CARBON	220	5%	1/4W	
R077	1-249-421-11	CARBON	2.2K	5%	1/4W	
R078	1-249-421-11	CARBON	2.2K	5%	1/4W	
R079	1-249-417-11	CARBON	1K	5%	1/4W	
R080	1-215-430-00	METAL	2.4K	1%	1/4W	
R081	1-249-425-11	CARBON	4.7K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R082	1-249-405-11	CARBON 100 5% 1/4W	
R083	1-249-409-11	CARBON 220 5% 1/4W	
R084	1-249-409-11	CARBON 220 5% 1/4W	
R085	1-249-416-11	CARBON 820 5% 1/4W	
R086	1-249-417-11	CARBON 1K 5% 1/4W	
R087	1-249-417-11	CARBON 1K 5% 1/4W	
R088	1-249-433-11	CARBON 22K 5% 1/4W	
R089	1-249-417-11	CARBON 1K 5% 1/4W	
R090	1-249-425-11	CARBON 4.7K 5% 1/4W	
R091	1-249-409-11	CARBON 220 5% 1/4W	
R092	1-249-408-11	CARBON 180 5% 1/4W	
R093	1-259-882-11	CARBON 3.3M 5% 1/4W	
R097	1-249-429-11	CARBON 10K 5% 1/4W	
R098	1-249-423-11	CARBON 3.3K 5% 1/4W	
R099	1-249-405-11	CARBON 100 5% 1/4W	
		<VARIABLE RESISTOR>	
RV001	1-228-996-00	RES, ADJ, CARBON 47K	
RV002	1-228-989-00	RES, ADJ, CARBON 470	
		<TRANSFORMER>	
T001	1-404-524-11	DAT	
		<CRYSTAL>	
X003	1-577-611-11	OSCILALTOR, CERAMIC	
X358	1-567-505-11	OSCILLATOR, CRYSTAL	
X443	1-567-504-11	OSCILLATOR, CRYSTAL	

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	*1-632-539-11	Q BOARD *******	
	1-537-268-11	TERMINAL BOARD, INPUT/OUTPUT	
	1-537-269-11	TERMINAL BOARD, INPUT/OUTPUT	
	*1-564-522-11	PLUG, CONNECTOR 7P	
		<CAPACITOR>	
C3001	1-126-160-11	ELECT 1MF 20% 50V	
C3002	1-124-589-11	ELECT 47MF 20% 16V	
C3003	1-124-589-11	ELECT 47MF 20% 16V	
C3004	1-126-160-11	ELECT 1MF 20% 50V	
C3005	1-126-160-11	ELECT 1MF 20% 50V	
C3006	1-126-160-11	ELECT 1MF 20% 50V	
C3007	1-164-097-11	CERAMIC 0.022MF 50V	
C3008	1-124-589-11	ELECT 47MF 20% 16V	
C3009	1-124-589-11	ELECT 47MF 20% 16V	
		<COMPOSITION CIRCUIT BLOCK>	
CP3002	1-232-096-00	COMPOSITION CIRCUIT BLOCK	
		<DIODE>	
D3001	8-719-911-19	DIODE 1SS119	
D3002	8-719-108-12	DIODE RD9.1EW	
D3009	8-719-110-36	DIODE RD13ES-B2	
		<IC>	
IC3001	1-808-916-11	MODULE, BUFFER (BUF-1)	
IC3003	1-808-916-11	MODULE, BUFFER (BUF-1)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC3004	1-808-916-11	MODULE, BUFFER (BUF-1)	
		<TRANSISTOR>	
Q3001	8-729-904-34	TRANSISTOR DTA114TS	
Q3003	8-729-900-89	TRANSISTOR XDC144ES	
Q3004	8-729-900-89	TRANSISTOR XDC144ES	
Q3005	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3006	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3007	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<RESISTOR>	
R3001	1-247-104-00	CARBON 75 5% 1/4W	
R3002	1-249-409-11	CARBON 220 5% 1/4W	
R3003	1-249-405-11	CARBON 100 5% 1/4W	
R3004	1-249-417-11	CARBON 1K 5% 1/4W	
R3005	1-249-417-11	CARBON 1K 5% 1/4W	
R3006	1-247-104-00	CARBON 75 5% 1/4W	
R3008	1-247-104-00	CARBON 75 5% 1/4W	
R3010	1-249-429-11	CARBON 10K 5% 1/4W	
R3011	1-249-429-11	CARBON 10K 5% 1/4W	
R3012	1-249-429-11	CARBON 10K 5% 1/4W	
R3013	1-249-405-11	CARBON 100 5% 1/4W	
R3014	1-249-417-11	CARBON 1K 5% 1/4W	
R3015	1-249-405-11	CARBON 100 5% 1/4W	
R3016	1-249-409-11	CARBON 220 5% 1/4W	
R3017	1-249-417-11	CARBON 1K 5% 1/4W	
R3018	1-249-417-11	CARBON 1K 5% 1/4W	
R3020	1-249-405-11	CARBON 100 5% 1/4W	
R3021	1-249-409-11	CARBON 220 5% 1/4W	
R3022	1-249-409-11	CARBON 220 5% 1/4W	
R3023	1-249-417-11	CARBON 1K 5% 1/4W	
R3024	1-249-431-11	CARBON 15K 5% 1/4W	
R3025	1-249-433-11	CARBON 22K 5% 1/4W	
R3030	1-249-440-11	CARBON 82K 5% 1/4W	
R3031	1-249-440-11	CARBON 82K 5% 1/4W	
R3032	1-249-440-11	CARBON 82K 5% 1/4W	
R3033	1-249-440-11	CARBON 82K 5% 1/4W	
R3034	1-249-440-11	CARBON 82K 5% 1/4W	
R3035	1-249-440-11	CARBON 82K 5% 1/4W	
R3036	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3037	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3038	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3040	1-249-417-11	CARBON 1K 5% 1/4W	
R3041	1-247-887-00	CARBON 220K 5% 1/4W	
		<SWITCH>	
S3002	1-570-257-11	SWITCH, PUSH (1 KEY)	
S3003	1-571-640-21	SWITCH, SLIDE	

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	*A-1296-936-A	A BOARD, COMPLETE ***************** (INCLUDING AB,E,H BOARD)	
	*1-506-517-11	PLUG, CONNECTOR (PC BOARD) 5P	
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
	*1-564-506-11	PLUG, CONNECTOR 3P	
	*1-564-509-11	PLUG, CONNECTOR 6P	
	*1-564-510-11	PLUG, CONNECTOR 7P	
	*1-564-511-11	PLUG, CONNECTOR 8P	
	*1-564-512-11	PLUG, CONNECTOR 9P	

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*1-564-513-11	PLUG, CONNECTOR 10P			
	*1-564-514-11	PLUG, CONNECTOR 11P			
	*1-564-515-11	PLUG, CONNECTOR 12P			
	*1-564-595-11	PLUG, CONNECTOR 14P			
	*1-568-371-11	PIN, CONNECTOR (PC BOARD) 15P			
	4-382-854-01	SCREW (M3X8), P, SW (+)			

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C200	1-164-079-11	CERAMIC	330PF	10%	50V
C201	1-124-907-11	ELECT	10MF	20%	50V
C202	1-124-477-11	ELECT	47MF	20%	16V
C203	1-124-477-11	ELECT	47MF	20%	16V
C204	1-124-477-11	ELECT	47MF	20%	16V
C205	1-124-477-11	ELECT	47MF	20%	16V
C206	1-126-101-11	ELECT	100MF	20%	16V
C207	1-164-097-11	CERAMIC	0.022MF		50V
C208	1-164-087-11	CERAMIC	0.0015MF	10%	50V
C209	1-124-464-11	ELECT	0.22MF	20%	50V
C210	1-124-907-11	ELECT	10MF	20%	50V
C211	1-124-360-00	ELECT	1000MF	20%	16V
C212	1-124-907-11	ELECT	10MF	20%	50V
C213	1-164-097-11	CERAMIC	0.022MF		50V
C214	1-106-383-00	MYLAR	0.047MF	10%	100V
C215	1-124-557-11	ELECT	1000MF	20%	25V
C216	1-126-101-11	ELECT	100MF	20%	16V
C217	1-164-079-11	CERAMIC	330PF	10%	50V
C218	1-102-973-00	CERAMIC	100PF	5%	50V
C219	1-126-101-11	ELECT	100MF	20%	16V
C220	1-124-477-11	ELECT	47MF	20%	25V
C222	1-126-101-11	ELECT	100MF	20%	16V
C223	1-124-477-11	ELECT	47MF	20%	16V
C224	1-102-527-11	CERAMIC	82PF	5%	50V
C226	1-124-499-11	ELECT	1MF	20%	50V
C227	1-106-343-00	MYLAR	0.001MF	10%	100V
C228	1-164-097-11	CERAMIC	0.022MF		50V
C229	1-124-477-11	ELECT	47MF	20%	16V
C230	1-124-499-11	ELECT	1MF	20%	50V
C231	1-164-097-11	CERAMIC	0.022MF		50V
C232	1-124-360-00	ELECT	1000MF	20%	16V
C233	1-124-499-11	ELECT	1MF	20%	50V
C234	1-124-477-11	ELECT	47MF	20%	16V
C235	1-102-971-00	CERAMIC	82PF	5%	50V
C236	1-124-902-00	ELECT	0.47MF	20%	50V
C237	1-164-027-11	CERAMIC	22PF	5%	50V
C238	1-124-477-11	ELECT	47MF	20%	16V
C239	1-106-351-00	MYLAR	0.0022MF	10%	100V
C240	1-124-927-11	ELECT	4.7MF	20%	50V
C241	1-130-479-00	MYLAR	0.0047MF	5%	50V
C242	1-164-097-11	CERAMIC	0.022MF		50V
C243	1-136-165-00	FILM	0.1MF	5%	50V
C244	1-124-925-11	ELECT	2.2MF	20%	50V
C245	1-124-902-00	ELECT	0.47MF	20%	50V
C246	1-124-477-11	ELECT	47MF	20%	16V
C247	1-126-101-11	ELECT	100MF	20%	16V
C248	1-124-907-11	ELECT	10MF	20%	50V
C249	1-126-157-11	ELECT	10MF	20%	16V
C250	1-124-902-00	ELECT	0.47MF	20%	50V
C251	1-164-097-11	CERAMIC	0.022MF		50V
C252	1-124-907-11	ELECT	10MF	20%	50V
C253	1-124-902-00	ELECT	0.47MF	20%	50V
C254	1-106-367-00	MYLAR	0.01MF	10%	100V
C255	1-164-083-11	CERAMIC	680PF	10%	50V
C256	1-102-525-11	CERAMIC	68PF	5%	50V
C257	1-124-477-11	ELECT	47MF	20%	16V
C258	1-124-903-11	ELECT	1MF	20%	50V
C259	1-136-153-00	MYLAR	0.01MF	10%	50V
C260	1-136-161-00	FILM	0.047MF	5%	50V
C261	1-124-477-11	ELECT	47MF	20%	16V
C262	1-124-499-11	ELECT	1MF	20%	50V
C263	1-136-155-00	FILM	0.015MF	5%	50V
C264	1-124-499-11	ELECT	1MF	20%	50V
C265	1-124-499-11	ELECT	1MF	20%	50V
C266	1-164-097-11	CERAMIC	0.022MF		50V
C267	1-124-120-11	ELECT	220MF	20%	16V
C268	1-164-097-11	CERAMIC	0.022MF		50V
C272	1-164-079-11	CERAMIC	330PF	10%	50V
C273	1-164-085-11	CERAMIC	0.001MF	10%	50V
C274	1-124-463-00	ELECT	0.1MF	20%	50V
C275	1-130-728-00	FILM	0.0022MF	5%	50V
C276	1-124-477-11	ELECT	47MF	20%	16V
C278	1-164-077-11	CERAMIC	220PF	10%	50V
C279	1-124-463-00	ELECT	0.1MF	20%	50V
C280	1-126-101-11	ELECT	100MF	20%	16V
C281	1-124-122-11	ELECT	100MF	20%	25V
C283	1-124-120-11	ELECT	220MF	20%	16V
C284	1-164-076-11	CERAMIC	180PF	10%	50V
C286	1-124-925-11	ELECT	2.2MF	20%	50V
C289	1-164-027-11	CERAMIC	22PF	5%	50V
C290	1-126-101-11	ELECT	100MF	20%	16V
C291	1-124-477-11	ELECT	47MF	20%	16V
C292	1-124-903-11	ELECT	1MF	20%	50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D200	8-719-936-56	DIODE DAN209S
D202	8-719-110-36	DIODE RD13ES-B2
D203	8-719-110-36	DIODE RD13ES-B2
D204	8-719-936-56	DIODE DAN209S
D205	8-719-911-19	DIODE 1SS119
D206	8-719-911-19	DIODE 1SS119
D207	8-719-110-36	DIODE RD13ES-B2
D208	8-719-109-69	DIODE RD3.6ES-B2
D209	8-719-911-19	DIODE 1SS119
D210	8-719-911-19	DIODE 1SS119
D211	8-719-936-56	DIODE DAN209S
D212	8-719-911-19	DIODE 1SS119
D213	8-719-016-42	DIODE MC932
D214	8-719-911-19	DIODE 1SS119
D215	8-719-911-19	DIODE 1SS119
D217	8-719-911-19	DIODE 1SS119
D218	8-719-911-19	DIODE 1SS119
D219	8-719-911-19	DIODE 1SS119
D220	8-719-911-19	DIODE 1SS119
D221	8-719-911-19	DIODE 1SS119
D222	8-719-911-19	DIODE 1SS119
D223	8-719-911-19	DIODE 1SS119
D224	8-719-109-93	DIODE RD6.2ES-B2
D225	8-719-109-93	DIODE RD6.2ES-B2
D298	8-719-911-19	DIODE 1SS119

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC201	1-808-916-11	MODULE, BUFFER (BUF-1)
IC202	1-808-916-11	MODULE, BUFFER (BUF-1)
IC203	1-808-916-11	MODULE, BUFFER (BUF-1)
IC204	1-808-916-11	MODULE, BUFFER (BUF-1)
IC205	8-759-509-16	IC XRU4053B

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC206	8-759-420-04	IC AN5265	
IC207	1-808-917-12	MODULE, CGA (CGA-1B)	
IC208	8-759-982-21	IC RC78L05A	
IC209	8-759-800-81	IC LA7016	
IC210	8-759-509-16	IC XRU4053B	
IC211	8-759-902-21	IC SN74LS221N	
IC212	8-759-634-10	IC M52001SP	
IC213	8-759-509-16	IC XRU4053B	
IC214	8-759-420-58	IC AN5860	
IC215	8-759-902-21	IC SN74LS221N	
IC218	8-759-982-21	IC RC78L05A	
IC220	8-759-146-55	IC UPC2412HF	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L201	1-410-494-11	INDUCTOR 1MMH	
L202	1-408-414-00	INDUCTOR 27UH	
L203	1-410-510-11	INDUCTOR 12UH	
L204	1-410-507-11	INDUCTOR 6.8UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q200	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q204	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q206	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q207	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q209	8-729-900-36	TRANSISTOR DTC124ES	
Q210	8-729-900-89	TRANSISTOR DTC144ES	
Q211	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q214	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q215	8-729-140-97	TRANSISTOR 2SB734-34	
Q216	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q217	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q218	8-729-202-03	TRANSISTOR 2SD1408-Y	
Q219	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q220	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q221	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q222	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q223	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q224	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q225	8-729-115-30	TRANSISTOR 2SK105A-30	
Q226	8-729-900-89	TRANSISTOR DTC144ES	
Q227	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q228	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q229	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q230	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q231	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q233	8-729-900-89	TRANSISTOR DTC144ES	
Q234	8-729-900-89	TRANSISTOR DTC144ES	
Q235	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q236	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q237	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q238	8-729-900-89	TRANSISTOR DTC144ES	
Q239	8-729-900-89	TRANSISTOR DTC144ES	
Q240	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q241	8-729-900-89	TRANSISTOR DTC144ES	
Q242	8-729-900-89	TRANSISTOR DTC144ES	
Q243	8-729-140-97	TRANSISTOR 2SB734-34	
Q244	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q245	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q246	8-729-900-89	TRANSISTOR DTC144ES	
Q247	8-729-900-89	TRANSISTOR DTC144ES	
Q248	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q249	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q250	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q251	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q252	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q253	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q254	8-729-140-97	TRANSISTOR 2SB734-34	
Q255	8-729-900-89	TRANSISTOR DTC144ES	
Q256	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q262	8-729-900-89	TRANSISTOR DTC144ES	
Q263	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q264	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q265	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q268	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q269	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q270	8-729-900-89	TRANSISTOR DTC144ES	
Q271	8-729-900-89	TRANSISTOR DTC144ES	
Q272	8-729-900-89	TRANSISTOR DTC144ES	
Q273	8-729-900-89	TRANSISTOR DTC144ES	
Q274	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q275	8-729-900-89	TRANSISTOR DTC144ES	
Q276	8-729-900-89	TRANSISTOR DTC144ES	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R200	1-247-704-11	CARBON 220 5% 1/4W	
R201	1-249-417-11	CARBON 1K 5% 1/4W	
R202	1-249-417-11	CARBON 1K 5% 1/4W	
R203	1-247-895-00	CARBON 470K 5% 1/4W	
R204	1-249-425-11	CARBON 4.7K 5% 1/4W	
R205	1-249-415-11	CARBON 680 5% 1/4W	
R206	1-249-382-11	CARBON 1.2 5% 1/4W	F
R207	1-247-725-11	CARBON 10K 5% 1/4W	
R208	1-249-441-11	CARBON 100K 5% 1/4W	
R209	1-249-441-11	CARBON 100K 5% 1/4W	
R210	1-249-401-11	CARBON 47 5% 1/4W	
R211	1-247-804-11	CARBON 75 5% 1/4W	
R212	1-247-804-11	CARBON 75 5% 1/4W	
R213	1-247-804-11	CARBON 75 5% 1/4W	
R214	1-247-804-11	CARBON 75 5% 1/4W	
R215	1-247-804-11	CARBON 75 5% 1/4W	
R216	1-249-421-11	CARBON 2.2K 5% 1/4W	
R217	1-249-417-11	CARBON 1K 5% 1/4W	
R218	1-247-717-11	CARBON 2.2K 5% 1/4W	
R219	1-247-717-11	CARBON 2.2K 5% 1/4W	
R220	1-247-717-11	CARBON 2.2K 5% 1/4W	
R221	1-247-717-11	CARBON 2.2K 5% 1/4W	
R222	1-249-421-11	CARBON 2.2K 5% 1/4W	
R223	1-249-437-11	CARBON 47K 5% 1/4W	
R224	1-249-421-11	CARBON 2.2K 5% 1/4W	
R225	1-249-417-11	CARBON 1K 5% 1/4W	
R226	1-249-401-11	CARBON 47 5% 1/4W	F
R227	1-249-401-11	CARBON 47 5% 1/4W	
R228	1-249-417-11	CARBON 1K 5% 1/4W	
R229	1-249-417-11	CARBON 1K 5% 1/4W	
R230	1-249-417-11	CARBON 1K 5% 1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R231	1-249-417-11	CARBON	1K	5%	1/4W	
R232	1-249-401-11	CARBON	47	5%	1/4W	
R233	1-249-427-11	CARBON	6.8K	5%	1/4W	
R234	1-249-401-11	CARBON	47	5%	1/4W	
R235	1-249-401-11	CARBON	47	5%	1/4W	
R236	1-249-437-11	CARBON	47K	5%	1/4W	
R237	1-247-713-11	CARBON	1K	5%	1/4W	
R238	1-249-419-11	CARBON	1.5K	5%	1/4W	
R239	1-247-895-00	CARBON	470K	5%	1/4W	
R240	1-249-433-11	CARBON	22K	5%	1/4W	
R241	1-249-429-11	CARBON	10K	5%	1/4W	
R242	1-247-708-11	CARBON	470	5%	1/4W	
R243	1-249-405-11	CARBON	100	5%	1/4W	
R244	1-249-415-11	CARBON	680	5%	1/4W	
R245	1-249-429-11	CARBON	10K	5%	1/4W	
R246	1-247-804-11	CARBON	75	5%	1/4W	
R247	1-249-389-11	CARBON	4.7	5%	1/4W	
R248	1-249-397-11	CARBON	22	5%	1/4W	F
R249	1-249-411-11	CARBON	330	5%	1/4W	
R250	1-249-417-11	CARBON	1K	5%	1/4W	
R251	1-249-437-11	CARBON	47K	5%	1/4W	
R252	1-249-429-11	CARBON	10K	5%	1/4W	
R253	1-249-441-11	CARBON	100K	5%	1/4W	
R254	1-249-417-11	CARBON	1K	5%	1/4W	
R255	1-247-713-11	CARBON	1K	5%	1/4W	
R256	1-249-417-11	CARBON	1K	5%	1/4W	
R257	1-249-417-11	CARBON	1K	5%	1/4W	
R258	1-249-433-11	CARBON	22K	5%	1/4W	
R259	1-249-440-11	CARBON	82K	5%	1/4W	
R260	1-249-417-11	CARBON	1K	5%	1/4W	
R261	1-247-713-11	CARBON	1K	5%	1/4W	
R262	1-249-431-11	CARBON	15K	5%	1/4W	
R263	1-249-429-11	CARBON	10K	5%	1/4W	
R264	1-249-425-11	CARBON	4.7K	5%	1/4W	
R265	1-249-426-11	CARBON	5.6K	5%	1/4W	
R266	1-247-717-11	CARBON	2.2K	5%	1/4W	
R267	1-247-700-11	CARBON	100	5%	1/4W	
R268	1-247-713-11	CARBON	1K	5%	1/4W	
R269	1-249-409-11	CARBON	220	5%	1/4W	
R270	1-249-437-11	CARBON	47K	5%	1/4W	
R271	1-249-405-11	CARBON	100	5%	1/4W	
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	
R273	1-249-401-11	CARBON	47	5%	1/4W	
R274	1-249-401-11	CARBON	47	5%	1/4W	
R275	1-249-401-11	CARBON	47	5%	1/4W	
R276	1-249-437-11	CARBON	47K	5%	1/4W	
R277	1-247-713-11	CARBON	1K	5%	1/4W	
R278	1-247-700-11	CARBON	100	5%	1/4W	
R279	1-247-713-11	CARBON	1K	5%	1/4W	
R280	1-249-417-11	CARBON	1K	5%	1/4W	
R281	1-249-421-11	CARBON	2.2K	5%	1/4W	
R282	1-247-700-11	CARBON	100	5%	1/4W	
R283	1-249-405-11	CARBON	100	5%	1/4W	
R284	1-249-419-11	CARBON	1.5K	5%	1/4W	
R285	1-249-429-11	CARBON	10K	5%	1/4W	
R286	1-247-713-11	CARBON	1K	5%	1/4W	
R287	1-249-411-11	CARBON	330	5%	1/4W	
R288	1-249-411-11	CARBON	330	5%	1/4W	
R289	1-249-416-11	CARBON	820	5%	1/4W	
R290	1-249-429-11	CARBON	10K	5%	1/4W	
R291	1-249-469-11	CARBON	100K	5%	1/4W	
R292	1-249-429-11	CARBON	10K	5%	1/4W	
R293	1-249-425-11	CARBON	4.7K	5%	1/4W	
R294	1-249-433-11	CARBON	22K	5%	1/4W	
R295	1-215-439-00	METAL	5.6K	1%	1/4W	
R296	1-215-453-00	METAL	22K	1%	1/4W	
R297	1-247-704-11	CARBON	220	5%	1/4W	
R298	1-249-433-11	CARBON	22K	5%	1/4W	
R299	1-249-417-11	CARBON	1K	5%	1/4W	
R300	1-249-409-11	CARBON	220	5%	1/4W	
R301	1-249-429-11	CARBON	10K	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-434-11	CARBON	27K	5%	1/4W	
R304	1-249-417-11	CARBON	1K	5%	1/4W	
R305	1-249-405-11	CARBON	100	5%	1/4W	
R306	1-247-713-11	CARBON	1K	5%	1/4W	
R307	1-247-704-11	CARBON	220	5%	1/4W	
R308	1-249-425-11	CARBON	4.7K	5%	1/4W	
R309	1-249-417-11	CARBON	1K	5%	1/4W	
R310	1-249-441-11	CARBON	100K	5%	1/4W	
R311	1-249-409-11	CARBON	220	5%	1/4W	
R312	1-249-409-11	CARBON	220	5%	1/4W	
R313	1-247-700-11	CARBON	100	5%	1/4W	
R314	1-249-409-11	CARBON	220	5%	1/4W	
R315	1-249-411-11	CARBON	330	5%	1/4W	
R316	1-249-417-11	CARBON	1K	5%	1/4W	
R317	1-249-405-11	CARBON	100	5%	1/4W	
R318	1-249-409-11	CARBON	220	5%	1/4W	
R319	1-249-425-11	CARBON	4.7K	5%	1/4W	
R320	1-249-429-11	CARBON	10K	5%	1/4W	
R321	1-249-429-11	CARBON	10K	5%	1/4W	
R322	1-247-704-11	CARBON	220	5%	1/4W	
R323	1-249-437-11	CARBON	47K	5%	1/4W	
R324	1-249-409-11	CARBON	220	5%	1/4W	
R325	1-217-482-00	FUSIBLE	12	5%	1W	F
R326	1-249-429-11	CARBON	10K	5%	1/4W	
R327	1-249-399-11	CARBON	33	5%	1/4W	
R328	1-249-409-11	CARBON	220	5%	1/4W	
R329	1-215-431-00	METAL	2.7K	1%	1/4W	
R330	1-215-455-00	METAL	27K	1%	1/4W	
R331	1-249-419-11	CARBON	1.5K	5%	1/4W	
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-429-11	CARBON	10K	5%	1/4W	
R334	1-249-419-11	CARBON	1.5K	5%	1/4W	
R335	1-249-403-11	CARBON	68	5%	1/4W	
R336	1-249-465-11	CARBON	47K	5%	1/4W	
R337	1-215-906-11	METAL OXIDE	15	5%	3W	F
R338	1-249-423-11	CARBON	3.3K	5%	1/4W	
R339	1-249-441-11	CARBON	100K	5%	1/4W	
R340	1-247-714-11	CARBON	1.2K	5%	1/4W	F
R341	1-249-419-11	CARBON	1.5K	5%	1/4W	
R342	1-247-725-11	CARBON	10K	5%	1/4W	
R343	1-249-421-11	CARBON	2.2K	5%	1/4W	
R344	1-249-435-11	CARBON	33K	5%	1/4W	
R345	1-247-713-11	CARBON	1K	5%	1/4W	
R346	1-249-465-11	CARBON	47K	5%	1/4W	
R347	1-249-427-11	CARBON	6.8K	5%	1/4W	
R348	1-247-700-11	CARBON	100	5%	1/4W	
R349	1-247-700-11	CARBON	100	5%	1/4W	
R350	1-247-700-11	CARBON	100	5%	1/4W	
R351	1-215-469-00	METAL	100K	1%	1/4W	
R352	1-247-883-00	CARBON	150K	5%	1/4W	
R353	1-247-883-00	CARBON	150K	5%	1/4W	
R354	1-249-419-11	CARBON	1.5K	5%	1/4W	
R355	1-247-704-11	CARBON	220	5%	1/4W	
R356	1-247-704-11	CARBON	220	5%	1/4W	
R357	1-249-419-11	CARBON	1.5K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R358	1-249-409-11	CARBON	220	5%	1/4W	
R359	1-249-467-11	CARBON	68K	5%	1/4W	
R360	1-249-437-11	CARBON	47K	5%	1/4W	
R361	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R362	1-249-401-11	CARBON	47	5%	1/4W	
R363	1-249-401-11	CARBON	47	5%	1/4W	
R364	1-249-401-11	CARBON	47	5%	1/4W	
R365	1-249-419-11	CARBON	1.5K	5%	1/4W	
R366	1-215-422-00	METAL	1.1K	1%	1/4W	
R367	1-249-417-11	CARBON	1K	5%	1/4W	
R368	1-249-405-11	CARBON	100	5%	1/4W	
R369	1-249-436-11	CARBON	39K	5%	1/4W	
R370	1-249-433-11	CARBON	22K	5%	1/4W	
R371	1-249-414-11	CARBON	560	5%	1/4W	
R372	1-249-433-11	CARBON	22K	5%	1/4W	
R373	1-249-433-11	CARBON	22K	5%	1/4W	
R374	1-249-409-11	CARBON	220	5%	1/4W	
R375	1-247-704-11	CARBON	220	5%	1/4W	
R376	1-249-433-11	CARBON	22K	5%	1/4W	
R377	1-249-429-11	CARBON	10K	5%	1/4W	
R378	1-249-422-11	CARBON	2.7K	5%	1/4W	
R379	1-249-433-11	CARBON	22K	5%	1/4W	
R380	1-247-899-11	CARBON	680K	5%	1/4W	
R381	1-249-437-11	CARBON	47K	5%	1/4W	
R382	1-249-429-11	CARBON	10K	5%	1/4W	
R383	1-249-425-11	CARBON	4.7K	5%	1/4W	
R384	1-249-433-11	CARBON	22K	5%	1/4W	
R385	1-249-433-11	CARBON	22K	5%	1/4W	
R386	1-249-421-11	CARBON	2.2K	5%	1/4W	
R387	1-249-441-11	CARBON	100K	5%	1/4W	
R388	1-249-417-11	CARBON	1K	5%	1/4W	
R389	1-249-409-11	CARBON	220	5%	1/4W	
R391	1-249-405-11	CARBON	100	5%	1/4W	
R392	1-247-722-11	CARBON	5.6K	5%	1/4W	
R393	1-247-726-11	CARBON	33K	5%	1/4W	
R394	1-249-465-11	CARBON	47K	5%	1/4W	
R395	1-249-441-11	CARBON	100K	5%	1/4W	
R396	1-247-700-11	CARBON	100	5%	1/4W	
R397	1-247-700-11	CARBON	100	5%	1/4W	
R398	1-249-425-11	CARBON	4.7K	5%	1/4W	
R399	1-247-700-11	CARBON	100	5%	1/4W	
R400	1-249-435-11	CARBON	33K	5%	1/4W	
R401	1-249-417-11	CARBON	1K	5%	1/4W	
R405	1-249-417-11	CARBON	1K	5%	1/4W	
R406	1-249-418-11	CARBON	1.2K	5%	1/4W	
R407	1-249-417-11	CARBON	1K	5%	1/4W	
R416	1-249-417-11	CARBON	1K	5%	1/4W	
R417	1-247-891-00	CARBON	330K	5%	1/4W	
R420	1-215-404-00	METAL	200	1%	1/4W	
R421	1-249-421-11	CARBON	2.2K	5%	1/4W	
R422	1-249-409-11	CARBON	220	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV201	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K
RV203	1-230-504-11	RES, ADJ, CARBON 220
RV204	1-230-504-11	RES, ADJ, CARBON 220

<THERMISTOR>

REF.NO.	PART NO.	DESCRIPTION
TH201	1-800-199-00	THERMISTOR

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1375-106-A	H BOARD, COMPLETE ****************	
	*1-564-506-11	PLUG, CONNECTOR 3P	
	1-568-106-11	PIN, CONNECTOR 4P	
	⚠*4-397-103-01	HOLDER, AC SWITCH	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C1001	1-124-907-11	ELECT	10MF	20%	50V
C1002	1-164-070-11	CERAMIC	100PF	5%	50V
C1003	1-164-070-11	CERAMIC	100PF	5%	50V
C1004	1-164-097-11	CERAMIC	0.022MF		50V
C1005	1-164-097-11	CERAMIC	0.022MF		50V
C1006	1-124-477-11	ELECT	47MF	20%	16V
C1007	1-164-097-11	CERAMIC	0.022MF		50V
C1008	1-164-097-11	CERAMIC	0.022MF		50V
C1009	1-164-097-11	CERAMIC	0.022MF		50V
C1010	1-124-477-11	ELECT	47MF	20%	16V
C1011	1-124-903-11	ELECT	1MF	20%	50V
C1012	1-124-903-11	ELECT	1MF	20%	50V
C1013	1-126-233-11	ELECT	22MF	20%	50V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D1000	8-719-109-89	DIODE RD5.6ESB2
D1001	8-719-933-28	DIODE DAP209S
D1002	8-719-921-42	DIODE MTZJ-5.1A
D1003	8-719-119-97	DIODE RD3.6ES-L1
D1005	8-719-936-56	DIODE DAN209S
D1006	8-719-911-19	DIODE 1SS119
D1007	8-719-936-56	DIODE DAN209S
D1008	8-719-921-86	DIODE MTZJ-13
D1009	8-719-911-19	DIODE 1SS119
D1010	8-719-109-89	DIODE RD5.6ESB2
D1101	1-809-656-11	LED UNIT (LEDU-16)
D1102	1-809-655-11	LED UNIT (LEDU-15)

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC1001	8-759-143-81	IC UPD7564CS-094
IC1002	8-752-330-59	IC CXK1011P
IC1003	8-759-982-21	IC RC78L05A
IC1004	8-759-102-28	IC UPD6326C

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L1001	1-410-521-11	INDUCTOR	100UH
L1002	1-408-429-00	INDUCTOR	470UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q1001	8-729-900-89	TRANSISTOR DTC144ES
Q1002	8-729-900-89	TRANSISTOR DTC144ES
Q1003	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1004	8-729-900-89	TRANSISTOR DTC144ES
Q1005	8-729-900-89	TRANSISTOR DTC144ES
Q1006	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1007	8-729-900-89	TRANSISTOR DTC144ES
Q1008	8-729-900-65	TRANSISTOR DTA144ES
Q1013	8-729-900-89	TRANSISTOR DTC144ES
Q1014	8-729-900-65	TRANSISTOR DTA144ES
Q1015	8-729-900-36	TRANSISTOR DTC124ES
Q1019	8-729-900-80	TRANSISTOR DTC114ES
Q1021	8-729-900-89	TRANSISTOR DTC144ES

H AB E

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q1022	8-729-900-89	TRANSISTOR DTC144ES				
Q1023	8-729-900-89	TRANSISTOR DTC144ES				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1001	1-249-414-11	CARBON	560	5%	1/4W	
R1002	1-249-414-11	CARBON	560	5%	1/4W	
R1003	1-247-704-11	CARBON	220	5%	1/4W	
R1004	1-249-414-11	CARBON	560	5%	1/4W	
R1005	1-249-414-11	CARBON	560	5%	1/4W	
R1006	1-247-713-11	CARBON	1K	5%	1/4W	
R1007	1-249-405-11	CARBON	100	5%	1/4W	
R1008	1-249-429-11	CARBON	10K	5%	1/4W	
R1009	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1010	1-249-441-11	CARBON	100K	5%	1/4W	
R1011	1-249-417-11	CARBON	1K	5%	1/4W	
R1012	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1013	1-249-417-11	CARBON	1K	5%	1/4W	
R1014	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1015	1-249-417-11	CARBON	1K	5%	1/4W	
R1016	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1017	1-249-469-11	CARBON	100K	5%	1/4W	
R1018	1-249-417-11	CARBON	1K	5%	1/4W	
R1019	1-249-433-11	CARBON	22K	5%	1/4W	
R1020	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1021	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1022	1-249-433-11	CARBON	22K	5%	1/4W	
R1023	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1024	1-249-414-11	CARBON	560	5%	1/4W	
R1025	1-249-417-11	CARBON	1K	5%	1/4W	
R1026	1-247-713-11	CARBON	1K	5%	1/4W	
R1030	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1031	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1032	1-249-433-11	CARBON	22K	5%	1/4W	
R1033	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1034	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1035	1-249-417-11	CARBON	1K	5%	1/4W	
R1036	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1037	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1038	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1039	1-249-409-11	CARBON	220	5%	1/4W	
R1040	1-249-409-11	CARBON	220	5%	1/4W	
R1041	1-249-417-11	CARBON	1K	5%	1/4W	
R1042	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1045	1-249-406-11	CARBON	120	5%	1/4W	
R1049	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1050	1-249-440-11	CARBON	82K	5%	1/4W	
R1051	1-249-417-11	CARBON	1K	5%	1/4W	
R1054	1-249-429-11	CARBON	10K	5%	1/4W	
R1055	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1056	1-249-417-11	CARBON	1K	5%	1/4W	
R1060	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1070	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1071	1-249-433-11	CARBON	22K	5%	1/4W	
R1072	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1073	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1074	1-249-417-11	CARBON	1K	5%	1/4W	
R1099	1-249-417-11	CARBON	1K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV1001	1-572-190-11	SWITCH BLOCK	
RV1001	1-572-190-11	SWITCH BLOCK	
RV1002	1-238-945-11	VOLUME BLOCK	
RV1003	1-238-946-11	VOLUME BLOCK	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S1001⚠	1-554-966-11	SWITCH, PUSH (AC POWER)(1 KEY)	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
X1001	1-577-163-11	VIBLATOR, CERAMIC	

****

*1-633-816-21 AB BOARD
****

*1-564-505-11 PLUG, CONNECTOR 2P
*1-565-481-11 CONNECTOR, BOARD TO BOARD 5P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3000	1-126-101-11	ELECT	100MF	20%	16V	
C3003	1-102-973-00	CERAMIC	100PF	5%	50V	
C3004	1-136-169-00	FILM	0.22MF	5%	50V	
C3005	1-136-161-00	FILM	0.047MF	5%	50V	
C3008	1-124-120-11	ELECT	220MF	20%	16V	
C3009	1-101-884-00	CERAMIC	56PF	5%	50V	
C3011	1-124-477-11	ELECT	47MF	20%	16V	
C3012	1-101-005-00	CERAMIC	0.022MF		50V	
C3013	1-136-173-00	FILM	0.47MF	5%	50V	
C3015	1-136-173-00	FILM	0.47MF	5%	50V	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q3001	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3002	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q3003	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3004	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q3005	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q3006	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3007	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3001	1-249-405-11	CARBON	100	5%	1/4W	
R3002	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3003	1-249-409-11	CARBON	220	5%	1/4W	
R3004	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3005	1-249-441-11	CARBON	100K	5%	1/4W	
R3006	1-249-437-11	CARBON	47K	5%	1/4W	
R3007	1-249-423-11	CARBON	3.3K	5%	1/4W	
R3008	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3009	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3010	1-249-417-11	CARBON	1K	5%	1/4W	
R3011	1-249-437-11	CARBON	47K	5%	1/4W	
R3012	1-247-903-00	CARBON	1M	5%	1/4W	
R3013	1-249-429-11	CARBON	10K	5%	1/4W	
R3014	1-249-409-11	CARBON	220	5%	1/4W	
R3015	1-249-425-11	CARBON	4.7K	5%	1/4W	
R3016	1-249-405-11	CARBON	100	5%	1/4W	
R3020	1-249-405-11	CARBON	100	5%	1/4W	
R3021	1-247-895-00	CARBON	470K	5%	1/4W	
R3022	1-249-421-11	CARBON	2.2K	5%	1/4W	

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*1-632-534-21 E BOARD

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

****

REF.NO.	PART NO.	DESCRIPTION
	*1-564-506-11	PLUG, CONNECTOR 3P

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
J4001	1-563-933-11	JACK, MINIATURE (DIA. 3.5)
J4002	1-563-933-11	JACK, MINIATURE (DIA. 3.5)

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R4001	1-247-743-11	CARBON	220	5%	1/2W
R4002	1-247-743-11	CARBON	220	5%	1/2W

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REF.NO.	PART NO.	DESCRIPTION
	*1-633-888-11	G1 BOARD

****

REF.NO.	PART NO.	DESCRIPTION
	*1-564-321-00	PIN, CONNECTOR 2P
	*4-341-751-01	EYELET EY33-EY36,EY67,EY68
	*4-341-752-01	EYELET EY39-EY42

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C991	⚠ 1-136-360-51	FILM	0.22MF	20%	250V

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T991	⚠ 1-421-776-11	LFT

****

REF.NO.	PART NO.	DESCRIPTION
	*A-1316-098-E	G BOARD, COMPLETE

****

REF.NO.	PART NO.	DESCRIPTION
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
	1-533-189-11	HOLDER, FUSE
	1-560-435-00	HORIZONTAL PIN ASSY 2P
	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P
	*1-564-321-00	PIN, CONNECTOR 2P
	*1-564-518-11	PLUG, CONNECTOR 3P
	*1-564-520-11	PLUG, CONNECTOR 5P
	*1-564-675-11	PIN, CONNECTOR 8P
	*1-565-395-11	PIN, CONNECTOR 3P
	1-568-106-11	PIN, CONNECTOR 4P
	3-704-359-01	SCREW (M3X10), SW (+) P
	*4-341-751-01	EYELET EY01-EY19,EY24-EY29,EY45,EY46, EY51-EY66,EY69,EY70,EY73-EY76
	*4-341-752-01	EYELET EY30-EY32,EY37,EY38,EY47-EY50, EY77,EY78
	4-363-414-00	SPACER, MICA
	*4-368-683-01	SPRING

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C901	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V
C902	⚠ 1-136-360-51	FILM	0.22MF	20%	250V
C903	⚠ 1-136-360-51	FILM	0.22MF	20%	250V
C904	⚠ 1-161-964-61	CERAMIC	0.0047MF		250V
C905	⚠ 1-162-578-51	CERAMIC	0.0047MF	20%	400V
C906	⚠ 1-161-964-61	CERAMIC	0.0047MF		250V
C909	1-102-050-00	CERAMIC	0.01MF	99%	500V
C910	1-102-050-00	CERAMIC	0.01MF	99%	500V
C911	1-162-115-00	CERAMIC	330PF	10%	2KV
C912	1-136-060-00	FILM	0.047MF	5%	400V
C913	1-136-060-00	FILM	0.047MF	5%	400V
C914	1-162-115-00	CERAMIC	330PF	10%	2KV
C915	1-162-115-00	CERAMIC	330PF	10%	2KV
C916	1-162-115-00	CERAMIC	330PF	10%	2KV
C917	1-136-627-11	FILM	0.022MF	3%	1KV
C918	1-124-126-00	ELECT	47MF	20%	16V
C919	1-124-126-00	ELECT	47MF	20%	16V
C920	1-136-079-00	FILM	0.01MF	3%	2KV
C921	1-137-496-11	FILM	0.039MF	5%	400V
C922	1-124-628-11	ELECT	220MF	20%	100V
C923	1-124-628-11	ELECT	220MF	20%	100V
C924	1-128-462-11	ELECT	33MF		160V
C925	1-124-126-00	ELECT	47MF	20%	16V
C926	1-126-104-11	ELECT	470MF	20%	25V
C927	1-124-510-11	ELECT	220MF	20%	35V
C928	1-123-875-11	ELECT	10MF	20%	50V
C929	1-124-126-00	ELECT	47MF	20%	16V
C930	1-162-116-00	CERAMIC	680PF	10%	2KV
C931	1-124-126-00	ELECT	47MF	20%	25V
C932	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C933	1-126-233-11	ELECT	22MF	20%	50V
C934	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C935	1-126-104-11	ELECT	470MF	20%	35V
C936	1-126-101-11	ELECT	100MF	20%	16V
C937	1-123-935-00	ELECT	33MF	20%	160V
C939	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C940	1-125-222-41	ELECT(BLOCK)	330MF	20%	400V
C943	⚠ 1-136-360-51	FILM	0.22MF	20%	250V
C944	1-126-337-11	ELECT	47MF	20%	35V
C945	1-124-798-11	ELECT	1MF	20%	160V
C946	1-124-798-11	ELECT	1MF	20%	160V
C947	1-124-126-00	ELECT	47MF	20%	25V
C948	1-162-116-00	CERAMIC	680PF	10%	2KV
C949	1-124-126-00	ELECT	47MF	20%	25V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D901	8-719-946-90	DIODE KBU4JL-6088
D902	8-719-301-18	DIODE RM2CS
D903	8-719-971-20	DIODE ERC38-06
D904	8-719-971-20	DIODE ERC38-06
D905	8-719-301-18	DIODE RM2CS
D906	8-719-971-20	DIODE ERC38-06
D907	8-719-971-20	DIODE ERC38-06
D908	8-719-300-33	DIODE RU-3AM
D909	8-719-500-25	DIODE D5KC20RH
D910	8-719-981-00	DIODE ERC81-004
D911	8-719-300-33	DIODE RU-3AM
D912	8-719-300-33	DIODE RU-3AM
D913	8-719-988-11	DIODE FE3D
D914	8-719-988-11	DIODE FE3D
D915	8-719-988-11	DIODE FE3D
D916	8-719-981-00	DIODE ERC81-004
D917	8-719-981-00	DIODE ERC81-004
D918	8-719-981-00	DIODE ERC81-004
D919	8-719-981-00	DIODE ERC81-004
D920	8-719-988-11	DIODE FE3D
D921	8-719-913-64	THYRISTOR CSM2B4A10
D922	8-719-911-55	DIODE U05G
D923	8-719-981-00	DIODE ERC81-004
D924	8-719-300-33	DIODE RU-3AM
D925	8-719-109-75	DIODE RD4.3ESB2
D926	8-719-300-33	DIODE RU-3AM
D927	8-719-300-33	DIODE RU-3AM

G **C**

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D928	8-719-300-33	DIODE RU-3AM	
D929	8-719-110-36	DIODE RD13ESB2	
D930	8-719-110-36	DIODE RD13ESB2	
D931	8-719-302-92	DIODE RB-151LFB	
D933	8-719-911-55	DIODE U05G	
D934	8-719-300-33	DIODE RU-3AM	
D935	8-719-300-33	DIODE RU-3AM	
		<FUSE>	
F901 ⚠	1-532-350-11	FUSE, TIME-LAG (4A/250V)	
		<IC>	
IC901	1-235-449-11	POWER MODULE (DM-19)	
IC902	8-759-982-21	IC RC78L05A	
		<COIL>	
L901	1-408-226-00	INDUCTOR 82UH	
L902	1-459-155-00	COIL (WITH CORE) 45UH	
L903	1-410-666-31	INDUCTOR 18UH	
L904	1-410-671-31	INDUCTOR 47UH	
L905	1-459-155-00	COIL (WITH CORE) 45UH	
L906	1-410-671-31	INDUCTOR 47UH	
L999	1-410-666-31	INDUCTOR 18UH	
		<IC LINK>	
PS901	1-532-675-21	LINK, IC	
PS902	1-532-675-21	LINK, IC	
		<TRANSISTOR>	
Q901	8-729-904-23	TRANSISTOR 2SC3318-S	
Q902	8-729-904-23	TRANSISTOR 2SC3318-S	
Q903	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q904	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q905	8-729-140-96	TRANSISTOR 2SD774-34	
Q906	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q907	8-729-140-96	TRANSISTOR 2SD774-34	
Q908	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q909	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	
R901 ⚠	1-244-939-91	CARBON 560K 5% 1/2W	
R902 ⚠	1-247-703-91	CARBON 180 5% 1/4W	F
R905	1-202-842-11	SOLID 220K 10% 1/2W	
R906	1-202-842-11	SOLID 220K 10% 1/2W	
R907	1-202-842-11	SOLID 220K 10% 1/2W	
R908	1-216-374-00	METAL OXIDE 2.7 5% 2W	F
R909	1-207-451-00	WIREWOUND 0.1 10% 1/2W	
R910	1-216-374-00	METAL OXIDE 2.7 5% 2W	F
R911	1-249-381-11	CARBON 1 5% 1/4W	F
R912	1-249-423-11	CARBON 3.3K 5% 1/4W	
R913	1-215-871-11	METAL OXIDE 2.2K 5% 1W	F
R914	1-249-429-11	CARBON 10K 5% 1/4W	
R915	1-215-871-11	METAL OXIDE 2.2K 5% 1W	F
R916	1-216-431-11	METAL OXIDE 560 5% 1W	F
R917	1-215-872-11	METAL OXIDE 3.3K 5% 1W	F
R918	1-249-441-11	CARBON 100K 5% 1/4W	
R919	1-247-700-11	CARBON 100 5% 1/4W	F
R920	1-215-469-00	METAL 100K 1% 1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R921	1-215-451-00	METAL 18K 1% 1/4W	
R922	1-215-451-00	METAL 18K 1% 1/4W	
R923	1-214-780-00	METAL 130K 1% 1/4W	
R924	1-202-842-11	SOLID 220K 10% 1/2W	
R925	1-215-449-00	METAL 15K 1% 1/4W	
R926	1-215-469-00	METAL 100K 1% 1/4W	
R927	1-249-474-11	CARBON 1 5% 1/2W	F
R928 ⚠	1-217-295-11	WIREWOUND 5.6 10% 5W	F
R930	1-249-437-11	CARBON 47K 5% 1/4W	
R931	1-249-421-11	CARBON 2.2K 5% 1/4W	
R932	1-249-425-11	CARBON 4.7K 5% 1/4W	
R933	1-249-423-11	CARBON 3.3K 5% 1/4W	
R934	1-215-867-00	METAL OXIDE 470 5% 1W	F
R935	1-216-427-00	METAL OXIDE 120 5% 1W	F
R941	1-247-289-00	CARBON 8.2M 5% 1W	
R942	1-249-395-11	CARBON 15 5% 1/4W	F
		<RELAY>	
RY901 ⚠	1-515-738-11	RELAY	
		<TRANSFORMER>	
T901 ⚠	1-421-704-11	CDT	
T902	1-421-886-11	PIT	
T903	1-421-889-11	PRT	
T904	1-421-889-11	PRT	
T905	1-421-888-11	PRT	
T906	1-421-885-11	COT	
T907	1-421-887-11	PHT	
T908 ⚠	1-421-776-11	LFT	
		<THERMISTOR>	
TH901 ⚠	1-800-820-12	THERMISTOR, POWER	
THP901 ⚠	1-808-059-11	THERMISTOR, POSITIVE	

****

*A-1331-040-A C BOARD, COMPLETE
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	*1-506-371-00	PIN, CONNECTOR 2P	
	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
	⚠ 1-526-819-11	SOCKET, PICTURE TUBE	
	*1-564-509-11	PLUG, CONNECTOR 6P	
	*1-564-513-11	PLUG, CONNECTOR 10P	
		<CAPACITOR>	
C701	1-124-903-11	ELECT 1MF 20% 50V	
C702	1-106-367-00	MYLAR 0.01MF 10% 100V	
C703	1-106-367-00	MYLAR 0.01MF 10% 100V	
C704	1-106-367-00	MYLAR 0.01MF 10% 100V	
C705	1-124-903-11	ELECT 1MF 20% 50V	
C706	1-164-097-11	CERAMIC 0.022MF 50V	
C707	1-124-910-11	ELECT 47MF 20% 50V	
C708	1-164-070-11	CERAMIC 100PF 5% 50V	
C709	1-164-070-11	CERAMIC 100PF 5% 50V	
C710	1-164-070-11	CERAMIC 100PF 5% 50V	
C711	1-123-948-00	ELECT 22MF 20% 250V	
C712	1-106-391-12	MYLAR 0.1MF 10% 200V	
C713	1-106-391-12	MYLAR 0.1MF 10% 200V	
C714	1-106-391-12	MYLAR 0.1MF 10% 200V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C715	1-124-667-11	ELECT	10MF	20%	100V
C716	1-124-667-11	ELECT	10MF	20%	100V
C717	1-124-667-11	ELECT	10MF	20%	100V
C718	1-124-798-11	ELECT	1MF	20%	160V
C719	1-124-798-11	ELECT	1MF	20%	160V
C720	1-124-798-11	ELECT	1MF	20%	160V
C721	1-162-114-00	CERAMIC	0.0047MF		2KV
C722	1-123-024-21	ELECT	33MF		160V
C723	1-162-114-00	CERAMIC	0.0047MF		2KV
C726	1-164-089-11	CERAMIC	0.0022MF		50V
C727	1-106-395-00	MYLAR	0.15MF	10%	200V
C729	1-124-122-11	ELECT	100MF	20%	25V
C730	1-162-116-00	CERAMIC	680PF	10%	2KV

<COMPOSITION CIRCUIT BLOCK>

CP702	1-232-096-00	COMPOSITION CIRCUIT BLOCK

<DIODE>

D701	8-719-901-83	DIODE 1SS83
D702	8-719-901-83	DIODE 1SS83
D703	8-719-901-83	DIODE 1SS83
D704	8-719-901-83	DIODE 1SS83
D705	8-719-901-83	DIODE 1SS83
D706	8-719-901-83	DIODE 1SS83
D707	8-719-901-83	DIODE 1SS83
D708	8-719-901-83	DIODE 1SS83
D709	8-719-901-83	DIODE 1SS83
D712	8-719-110-06	DIODE RD8.2ES-B1
D713	8-719-901-83	DIODE 1SS83

<IC>

IC701	8-752-039-40	IC CXA1044BP
IC702	8-749-921-15	IC VPM03F

<COIL>

L701	1-410-459-11	INDUCTOR	1.2UH
L702	1-410-459-11	INDUCTOR	1.2UH
L703	1-410-459-11	INDUCTOR	1.2UH
L704	1-410-675-31	INDUCTOR	120UH
L706	1-408-420-00	INDUCTOR	82UH

<RESISTOR>

R700	1-247-887-00	CARBON	220K	5%	1/4W
R701	1-249-437-11	CARBON	47K	5%	1/4W
R702	1-249-437-11	CARBON	47K	5%	1/4W
R703	1-249-417-11	CARBON	1K	5%	1/4W
R704	1-249-405-11	CARBON	100	5%	1/4W
R705	1-249-413-11	CARBON	470	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W
R708	1-249-401-11	CARBON	47	5%	1/4W
R709	1-249-401-11	CARBON	47	5%	1/4W
R710	1-249-405-11	CARBON	100	5%	1/4W
R711	1-249-413-11	CARBON	470	5%	1/4W
R712	1-249-413-11	CARBON	470	5%	1/4W
R713	1-249-413-11	CARBON	470	5%	1/4W
R714	1-249-402-11	CARBON	56	5%	1/4W
R715	1-249-402-11	CARBON	56	5%	1/4W
R716	1-249-402-11	CARBON	56	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R717	1-247-903-00	CARBON	1M	5%	1/4W	
R718	1-247-903-00	CARBON	1M	5%	1/4W	
R719	1-247-903-00	CARBON	1M	5%	1/4W	
R720	1-249-417-11	CARBON	1K	5%	1/4W	
R721	1-249-417-11	CARBON	1K	5%	1/4W	
R722	1-249-417-11	CARBON	1K	5%	1/4W	
R723	1-215-872-11	METAL OXIDE	3.3K	5%	1W	F
R724	1-215-872-11	METAL OXIDE	3.3K	5%	1W	F
R725	1-215-872-11	METAL OXIDE	3.3K	5%	1W	F
R729	1-249-417-11	CARBON	1K	5%	1/4W	
R730	1-249-417-11	CARBON	1K	5%	1/4W	
R731	1-249-417-11	CARBON	1K	5%	1/4W	
R732	1-247-695-11	SOLID	22	5%	1/4W	
R733	1-247-695-11	SOLID	22	5%	1/4W	
R734	1-247-695-11	SOLID	22	5%	1/4W	
R735	1-202-838-00	SOLID	100K	10%	1/2W	
R736	1-249-401-11	CARBON	47	5%	1/4W	
R737	1-249-401-11	CARBON	47	5%	1/4W	
R738	1-249-401-11	CARBON	47	5%	1/4W	
R739	1-249-434-11	CARBON	27K	5%	1/4W	
R740	1-249-433-11	CARBON	22K	5%	1/4W	
R741	1-249-429-11	CARBON	10K	5%	1/4W	
R742	1-249-417-11	CARBON	1K	5%	1/4W	
R743	1-249-413-11	CARBON	470	5%	1/4W	
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-429-11	CARBON	10K	5%	1/4W	
R746	1-249-429-11	CARBON	10K	5%	1/4W	

<VARIABLE RESISTOR>

RV700	1-228-996-00	RES, ADJ, CARBON 47K
RV701	1-228-993-00	RES, ADJ, CARBON 4.7K
RV702	1-230-504-11	RES, ADJ, CARBON 220
RV703	1-230-504-11	RES, ADJ, CARBON 220
RV704	1-230-504-11	RES, ADJ, CARBON 220
RV705	1-224-252-XX	RES, ADJ, METAL GLAZE 10K
RV706	1-224-252-XX	RES, ADJ, METAL GLAZE 10K
RV707	1-224-252-XX	RES, ADJ, METAL GLAZE 10K
RV708	1-230-798-11	RES, ADJ, METAL GLAZE 90M
RV709	1-228-993-00	RES, ADJ, CARBON 4.7K
RV710	1-228-990-00	RES, ADJ, CARBON 1K
RV711	1-228-990-00	RES, ADJ, CARBON 1K

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*A-1335-023-A D1 BOARD, COMPLETE
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	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P
	*1-564-506-11	PLUG, CONNECTOR 3P
	*1-564-516-11	PLUG, CONNECTOR 13P
	*1-564-674-11	PIN, CONNECTOR 8P
	*1-568-536-11	PLUG (MINIATURE DY) 6P
	*4-341-751-01	EYELET EY9-EY70
	*4-341-752-01	EYELET EY1-EY8
	*4-381-827-01	HOLDER, TR
	4-382-854-01	SCREW (M3X8), P, SW (+)

<CAPACITOR>

C501	1-123-024-21	ELECT	33MF		160V
C502	1-124-902-00	ELECT	0.47MF	20%	50V
C503	1-124-119-00	ELECT	330MF	20%	16V
C504	1-124-484-11	ELECT	220MF	20%	35V
C505	1-124-126-00	ELECT	47MF	20%	25V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D1

REF.NO.	PART NO.	DESCRIPTION			REMARK
C506	1-161-830-00	CERAMIC	0.0047MF	99%	500V
C507	1-126-101-11	ELECT	100MF	20%	16V
C508	1-106-391-12	MYLAR	0.1MF	10%	200V
C509	1-124-634-11	ELECT	1MF	20%	250V
C510	1-123-379-00	ELECT	0.47MF	20%	50V
C511	1-136-541-11	FILM	1.5MF	5%	200V
C512	1-106-365-00	MYLAR	0.0082MF	99%	200V
C513	1-136-627-11	FILM	0.022MF	3%	1KV
C514	1-136-569-11	FILM	1.2MF	5%	200V
C515	⚠ 1-130-336-51	FILM	0.0068MF	5%	630V
C517	1-126-233-11	ELECT	22MF	20%	50V
C518	1-136-598-11	FILM	3MF	5%	200V
C519	1-126-234-11	ELECT	2200MF	20%	16V
C520	1-106-383-00	MYLAR	0.047MF	99%	200V
C521	1-124-907-11	ELECT	10MF	20%	50V
C522	1-124-927-11	ELECT	4.7MF	20%	50V
C523	1-124-477-11	ELECT	47MF	20%	16V
C524	1-162-114-00	CERAMIC	0.0047MF		2KV
C525	1-108-965-11	MYLAR	0.33MF	10%	200V
C526	1-123-949-00	ELECT	33MF	20%	250V
C527	1-136-569-11	FILM	1.2MF	5%	200V
C528	1-102-978-00	CERAMIC	220PF	5%	50V
C529	1-124-562-11	ELECT	47MF	20%	160V
C531	1-129-702-00	FILM	0.001MF	10%	630V
C532	1-126-105-11	ELECT	1000MF	20%	35V
C533	1-126-101-11	ELECT	100MF	20%	16V
C534	1-129-702-00	FILM	0.001MF	10%	630V
C535	1-124-347-00	ELECT	100MF	20%	160V
C536	1-136-598-11	FILM	3MF	5%	200V
C537	1-124-120-11	ELECT	220MF	20%	16V
C538	1-162-116-00	CERAMIC	680PF	10%	2KV
C539	1-108-688-11	MYLAR	0.0047MF	10%	200V
C540	⚠ 1-162-115-91	CERAMIC	330PF	10%	2KV
C542	1-102-038-00	CERAMIC	0.001MF		500V
C543	1-136-853-11	FILM	0.56MF	5%	200V
C544	1-106-355-12	MYLAR	0.0033MF	10%	100V
C545	1-124-799-11	ELECT	2.2MF	20%	160V
C546	1-102-038-00	CERAMIC	0.001MF		500V
C547	1-129-720-00	FILM	0.033MF	5%	630V
C548	1-106-359-00	MYLAR	0.0047MF	10%	100V
C549	1-106-343-00	MYLAR	0.001MF	10%	100V
C550	1-162-117-00	CERAMIC	100PF	10%	500V
C551	1-124-907-11	ELECT	10MF	20%	50V
C552	1-129-723-00	FILM	0.056MF	5%	630V
C553	⚠ 1-108-429-91	MYLAR	0.047MF	99%	200V
C554	1-106-363-00	MYLAR	0.0068MF	10%	100V
C555	1-136-071-00	FILM	0.0057MF	3%	2KV
C556	1-124-477-11	ELECT	47MF	20%	16V
C557	1-124-667-11	ELECT	10MF	20%	100V
C558	1-106-367-00	MYLAR	0.01MF	10%	100V
C559	1-126-163-11	ELECT	4.7MF	20%	50V
C560	1-106-367-00	MYLAR	0.01MF	10%	100V
C561	⚠ 1-162-134-91	CERAMIC	470PF	10%	2KV
C562	1-136-173-00	FILM	0.47MF	5%	50V
C563	1-106-367-00	MYLAR	0.01MF	10%	100V
C564	1-162-134-11	CERAMIC	470PF	10%	2KV
C565	1-162-134-11	CERAMIC	470PF	10%	2KV
C567	1-162-282-31	CERAMIC	100PF	10%	50V
C569	1-164-077-11	CERAMIC	220PF	10%	50V
C570	1-162-294-31	CERAMIC	0.001MF	10%	50V
C571	1-102-110-00	CERAMIC	220PF	10%	50V
C572	1-162-131-11	CERAMIC	220PF	10%	2KV
C573	1-162-116-00	CERAMIC	680PF	10%	2KV

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D505	8-719-901-95	DIODE V19C-SS	
D507	8-719-976-64	DIODE RGP02-17	
D508	8-719-109-90	DIODE RD5.6ES-B3	
D509	8-719-911-55	DIODE U05G	
D510	8-719-976-64	DIODE RGP02-17	
D512	8-719-110-48	DIODE RD18ES-B1	
D513	8-719-973-95	DIODE ERD09-15	
D514	8-719-971-20	DIODE ERC38-06	
D515	8-719-973-95	DIODE ERD09-15	
D516	8-719-911-55	DIODE U05G	
D518	8-719-971-20	DIODE ERC38-06	
D519	8-719-302-59	DIODE FMU-26S	
D520	8-719-911-19	DIODE 1SS119	
D521	8-719-911-19	DIODE 1SS119	
D522	8-719-971-20	DIODE ERC38-06	
D525	8-719-300-33	DIODE RU-3AM	
D526	8-719-911-55	DIODE U05G	
D527	8-719-300-33	DIODE RU-3AM	
D528	8-719-911-19	DIODE 1SS119	
D529	8-719-911-19	DIODE 1SS119	
D530	8-719-911-19	DIODE 1SS119	
D531	8-719-911-19	DIODE 1SS119	
		<IC>	
IC501	8-759-982-26	IC RC78L12A	
IC502	8-759-014-95	IC MC1495L	
IC503	8-759-981-95	IC RC4558S	
		<COIL>	
L501	1-459-215-00	CORE COIL	
L502	1-421-421-00	COIL, CHOKE 100UH	
L503	⚠ 1-459-671-11	COIL (WITH CORE)	
L504	⚠ 1-459-670-12	H.L.C	
L505	1-459-104-00	COIL, DUST CORE	
L506	1-408-239-00	INDUCTOR 4.7MMH	
L507	1-408-092-00	INDUCTOR 330UH	
L508	1-422-613-11	COIL, AIR CORE	
L509	1-459-215-00	CORE COIL	
L510	1-459-454-00	COIL, FERRITE CHOKE	
L511	1-421-329-00	COIL, CHOKE	
L512	1-459-123-00	COIL,DUST CORE(PAC)	
L513	1-408-072-00	INDUCTOR 47UH	
		<NEON LAMP>	
NL502	1-519-108-XX	LAMP, NEON	
		<TRANSISTOR>	
Q502	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q504	8-729-140-97	TRANSISTOR 2SB734-34	
Q505	8-729-140-96	TRANSISTOR 2SD774-34	
Q507	8-729-140-96	TRANSISTOR 2SD774-34	
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q509	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q511	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q513	8-729-805-07	TRANSISTOR 2SD1887-CA	
Q516	8-729-140-96	TRANSISTOR 2SD774-34	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q517	8-729-140-97	TRANSISTOR 2SB734-34				
Q519	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q520	8-729-900-36	TRANSISTOR DTC124ES				
Q521	8-729-803-82	TRANSISTOR 2SC3468-E				
Q522	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q523	8-729-401-18	TRANSISTOR 2SB940-P				
Q524	8-729-401-21	TRANSISTOR 2SD1264-P				
Q525	8-729-900-36	TRANSISTOR DTC124ES				
Q526	8-729-906-95	TRANSISTOR 2SD2061-D				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R500	1-215-918-00	METAL OXIDE	1.5K	5%	3W	F
R501	1-249-425-11	CARBON	4.7K	5%	1/4W	
R503	1-249-428-11	CARBON	8.2K	5%	1/4W	
R504	1-249-431-11	CARBON	15K	5%	1/4W	
R505	1-249-466-11	CARBON	56K	5%	1/4W	
R506	1-249-427-11	CARBON	6.8K	5%	1/4W	
R507	1-249-426-11	CARBON	5.6K	5%	1/4W	
R508	1-249-409-11	CARBON	220	5%	1/4W	
R509	1-247-719-11	CARBON	3.3K	5%	1/4W	
R510	1-249-429-11	CARBON	10K	5%	1/4W	
R512	1-216-430-11	METAL OXIDE	390	5%	1W	F
R513	1-249-431-11	CARBON	15K	5%	1/4W	
R514	1-249-440-11	CARBON	82K	5%	1/4W	
R515	1-216-450-00	METAL OXIDE	82	5%	2W	F
R516	1-249-417-11	CARBON	1K	5%	1/4W	
R517	1-216-425-11	METAL OXIDE	56	5%	1W	F
R518	1-249-425-11	CARBON	4.7K	5%	1/4W	
R519	1-249-406-11	CARBON	120	5%	1/4W	
R520	1-215-886-11	METAL OXIDE	100	5%	2W	F
R522	1-249-429-11	CARBON	10K	5%	1/4W	
R523	1-216-422-11	METAL OXIDE	18	5%	1W	F
R524	1-249-427-11	CARBON	6.8K	5%	1/4W	
R525	1-249-429-11	CARBON	10K	5%	1/4W	
R526	1-249-429-11	CARBON	10K	5%	1/4W	
R527	1-249-433-11	CARBON	22K	5%	1/4W	
R528	1-249-434-11	CARBON	27K	5%	1/4W	
R529	1-249-406-11	CARBON	120	5%	1/4W	
R530	1-202-719-00	SOLID	1M	10%	1/2W	
R531	1-215-863-11	METAL OXIDE	100	5%	1W	F
R532	1-249-432-11	CARBON	18K	5%	1/4W	
R534	1-249-432-11	CARBON	18K	5%	1/4W	
R535	1-249-429-11	CARBON	10K	5%	1/4W	
R536	1-202-849-00	SOLID	820K	10%	1/2W	
R537	1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R538	1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R539	1-249-427-11	CARBON	6.8K	5%	1/4W	
R540	1-249-414-11	CARBON	560	5%	1/4W	
R541	1-202-719-00	SOLID	1M	10%	1/2W	
R542	1-249-422-11	CARBON	2.7K	5%	1/4W	
R543	1-249-438-11	CARBON	56K	5%	1/4W	
R544	1-249-419-11	CARBON	1.5K	5%	1/4W	
R545	1-249-429-11	CARBON	10K	5%	1/4W	
R546	1-216-349-00	METAL OXIDE	1	5%	1W	F
R549	1-216-428-00	METAL OXIDE	180	5%	1W	F
R550	1-249-424-11	CARBON	3.9K	5%	1/4W	
R551	1-215-882-00	METAL OXIDE	22	5%	2W	F
R553	1-216-371-00	METAL OXIDE	1.5	5%	2W	F
R554	1-249-429-11	CARBON	10K	5%	1/4W	
R555	1-249-431-11	CARBON	15K	5%	1/4W	
R556	1-214-786-00	METAL	240K	1%	1/4W	
R557	1-249-429-11	CARBON	10K	5%	1/4W	
R558	1-214-925-00	CARBON	330K	5%	1/2W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R559	⚠ 1-213-074-51	FUSIBLE	39	5%	1W	F
R560	1-216-369-00	METAL OXIDE	1	5%	2W	F
R563	1-249-387-11	CARBON	3.3	5%	1/4W	F
R564	1-249-429-11	CARBON	10K	5%	1/4W	
R565	1-247-721-11	CARBON	4.7K	5%	1/4W	
R566	1-247-720-11	CARBON	3.9K	5%	1/4W	
R567	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R569	1-216-454-11	METAL OXIDE	390	5%	2W	F
R570	1-215-890-11	METAL OXIDE	470	5%	2W	F
R571	1-202-841-00	SOLID	180K	10%	1/2W	
R572	1-202-842-11	SOLID	220K	10%	1/2W	
R575	1-249-467-11	CARBON	68K	5%	1/4W	
R576	1-249-417-11	CARBON	1K	5%	1/4W	
R577	1-249-465-11	CARBON	47K	5%	1/4W	
R579	1-247-891-00	CARBON	330K	5%	1/4W	
R580	1-249-429-11	CARBON	10K	5%	1/4W	
R581	1-249-435-11	CARBON	33K	5%	1/4W	
R582	1-249-429-11	CARBON	10K	5%	1/4W	
R583	1-249-417-11	CARBON	1K	5%	1/4W	
R584	1-249-409-11	CARBON	220	5%	1/4W	
R585	1-249-401-11	CARBON	47	5%	1/4W	F
R586	1-202-818-00	SOLID	1K	10%	1/2W	
R587	1-215-894-11	METAL OXIDE	2.2K	5%	2W	F
R588	1-249-429-11	CARBON	10K	5%	1/4W	
R589	1-249-417-[illegible]	CARBON	1K	5%	1/4W	F
R590	1-249-417-11	CARBON	1K	5%	1/4W	
R591	1-249-393-11	CARBON	10	5%	1/4W	F
R592	1-215-874-11	METAL OXIDE	6.8K	5%	1W	F
R593	1-249-427-11	CARBON	6.8K	5%	1/4W	
R594	1-215-921-11	METAL OXIDE	4.7K	5%	3W	F
R595	1-216-436-00	METAL OXIDE	3.9K	5%	1W	F
R596	1-249-463-11	CARBON	27K	5%	1/4W	
R597	1-249-405-11	CARBON	100	5%	1/4W	
R598	1-249-439-11	CARBON	68K	5%	1/4W	
R599	1-249-405-11	CARBON	100	5%	1/4W	
R600	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R601	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R602	1-247-717-11	CARBON	2.2K	5%	1/4W	
R603	1-249-413-11	CARBON	470	5%	1/4W	
R604	1-249-429-11	CARBON	10K	5%	1/4W	
R605	1-247-713-11	CARBON	1K	5%	1/4W	
R606	1-216-398-11	METAL OXIDE	5.6	5%	3W	F
R607	1-216-398-11	METAL OXIDE	5.6	5%	3W	F
R611	1-216-399-00	METAL OXIDE	6.8	5%	3W	F
R614	1-249-429-11	CARBON	10K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV501	1-228-720-00	RES, ADJ, CERAMIC CARBON 1K
RV502	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV503	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV504	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K
RV505	1-228-995-00	RES, ADJ, METAL GLAZE 22K

<RELAY>

REF.NO.	PART NO.	DESCRIPTION
RY501	1-515-626-11	RELAY
RY502	1-515-626-11	RELAY
RY503	1-515-626-11	RELAY
RY504	1-515-626-11	RELAY

<SPARK GAP>

REF.NO.	PART NO.	DESCRIPTION
SG501	1-519-422-11	GAP, SPARK

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D1 D2

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T501	1-437-164-11	HDT	
T502	⚠ 1-439-390-11	TRANSFORMER ASSY, FLYBACK (NX-2100)	

<THERMISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
TH501	1-800-193-00	THERMISTOR	

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*A-1335-024-A D2 BOARD, COMPLETE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
	*1-564-506-11	PLUG, CONNECTOR 3P	
	*1-564-507-11	PLUG, CONNECTOR 4P	
	*1-564-508-11	PLUG, CONNECTOR 5P	
	*1-564-511-11	PLUG, CONNECTOR 8P	
	*1-564-512-11	PLUG, CONNECTOR 9P	
	*1-564-516-11	PLUG, CONNECTOR 13P	
	*1-564-595-11	PLUG, CONNECTOR 14P	
	*3-738-015-01	COVER, (DIA. 6) CARBON VR	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C1500	1-126-103-11	ELECT	470MF	20%	16V
C1502	1-124-907-11	ELECT	10MF	20%	50V
C1503	1-126-103-11	ELECT	470MF	20%	16V
C1504	1-124-477-11	ELECT	47MF	20%	16V
C1505	1-164-070-11	CERAMIC	100PF	5%	50V
C1506	1-124-907-11	ELECT	10MF	20%	50V
C1507	1-124-477-11	ELECT	47MF	20%	16V
C1508	1-124-907-11	ELECT	10MF	20%	50V
C1509	1-164-077-11	CERAMIC	220PF	10%	50V
C1510	1-164-097-11	CERAMIC	0.022MF		50V
C1511	1-164-097-11	CERAMIC	0.022MF		50V
C1512	1-124-903-11	ELECT	1MF	20%	50V
C1514	1-136-173-00	FILM	0.47MF	5%	50V
C1516	1-124-907-11	ELECT	10MF	20%	50V
C1519	1-124-927-11	ELECT	4.7MF	20%	50V
C1520	1-164-081-11	CERAMIC	470PF	10%	50V
C1521	1-164-097-11	CERAMIC	0.022MF		50V
C1522	1-124-463-00	ELECT	0.1MF	20%	50V
C1523	1-124-477-11	ELECT	47MF	20%	16V
C1524	1-164-097-11	CERAMIC	0.022MF		50V
C1525	1-106-369-00	MYLAR	0.012MF	10%	100V
C1526	1-136-171-00	FILM	0.033MF	5%	50V
C1527	1-130-483-00	MYLAR	0.01MF	5%	50V
C1528	1-124-499-11	ELECT	1MF	20%	50V
C1529	1-126-103-11	ELECT	470MF	20%	16V
C1530	1-124-477-11	ELECT	47MF	20%	16V
C1531	1-136-173-00	FILM	0.47MF	5%	50V
C1532	1-124-903-11	ELECT	1MF	20%	50V
C1533	1-124-903-11	ELECT	1MF	20%	50V
C1534	1-126-101-11	ELECT	100MF	20%	16V
C1535	1-108-622-11	MYLAR	0.0047MF	10%	100V
C1536	1-124-927-11	ELECT	4.7MF	20%	50V
C1537	1-124-927-11	ELECT	4.7MF	20%	50V
C1538	1-102-129-00	CERAMIC	0.01MF	10%	50V
C1539	1-124-927-11	ELECT	4.7MF	20%	50V
C1540	1-106-375-12	MYLAR	0.022MF	10%	100V
C1541	1-130-477-00	MYLAR	0.0033MF	5%	50V
C1542	1-106-220-00	MYLAR	0.1MF	10%	100V
C1543	1-136-171-00	FILM	0.033MF	5%	50V
C1544	1-102-129-00	CERAMIC	0.01MF	10%	50V
C1545	1-124-903-11	ELECT	1MF	20%	50V
C1546	1-124-499-11	ELECT	1MF	20%	50V
C1547	1-124-927-11	ELECT	4.7MF	20%	50V
C1548	1-136-173-00	FILM	0.47MF	5%	50V
C1550	1-124-927-11	ELECT	4.7MF	20%	50V
C1551	1-124-907-11	ELECT	10MF	20%	50V
C1552	1-106-363-00	MYLAR	0.0068MF	10%	100V
C1553	1-136-173-00	FILM	0.47MF	5%	50V
C1554	1-126-103-11	ELECT	470MF	20%	16V
C1555	1-108-628-11	MYLAR	0.015MF	10%	100V
C1556	1-164-079-11	CERAMIC	330PF	10%	50V
C1557	1-129-793-00	FILM	0.047MF	5%	100V
C1558	1-124-907-11	ELECT	10MF	20%	50V
C1559	1-164-097-11	CERAMIC	0.022MF		50V
C1560	1-124-925-11	ELECT	2.2MF	20%	50V
C1561	1-102-816-00	CERAMIC	120PF	5%	50V
C1562	1-130-475-00	MYLAR	0.0022MF	10%	50V
C1563	1-164-079-11	CERAMIC	330PF	10%	50V
C1564	1-164-097-11	CERAMIC	0.022MF		50V
C1565	1-108-622-11	MYLAR	0.0047MF	10%	100V
C1566	1-124-903-11	ELECT	1MF	20%	50V
C1567	1-106-375-12	MYLAR	0.022MF	10%	100V
C1568	1-108-628-11	MYLAR	0.015MF	10%	100V
C1569	1-126-101-11	ELECT	100MF	20%	16V
C1570	1-124-902-00	ELECT	0.47MF	20%	50V
C1571	1-124-903-11	ELECT	1MF	20%	50V
C1572	1-124-903-11	ELECT	1MF	20%	50V
C1573	1-126-233-11	ELECT	22MF	20%	50V
C1574	1-126-233-11	ELECT	22MF	20%	50V
C1575	1-126-233-11	ELECT	22MF	20%	50V
C1576	1-124-907-11	ELECT	10MF	20%	50V
C1577	1-124-477-11	ELECT	47MF	20%	16V
C1578	1-124-907-11	ELECT	10MF	20%	50V
C1579	1-126-101-11	ELECT	100MF	20%	16V
C1580	1-164-097-11	CERAMIC	0.022MF		50V
C1581	1-126-103-11	ELECT	470MF	20%	16V
C1582	1-124-120-11	ELECT	220MF	20%	16V
C1583	1-162-293-31	CERAMIC	820PF	10%	50V
C1584	1-162-293-31	CERAMIC	820PF	10%	50V
C1585	1-124-907-11	ELECT	10MF	20%	50V
C1586	1-124-907-11	ELECT	10MF	20%	50V

<COMPOSITION CIRCUIT BLOCK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CP1500	1-232-857-11	COMPOSITION CIRCUIT BLOCK	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1501	8-719-911-19	DIODE 1SS119	
D1502	8-719-109-97	DIODE RD6.8ES-B2	
D1503	8-719-110-08	DIODE RD8.2ES-B2	
D1504	8-719-109-68	DIODE RD3.6ES-B1	
D1505	8-719-911-19	DIODE 1SS119	
D1506	8-719-110-13	DIODE RD9.1ES-B2	
D1507	8-719-911-19	DIODE 1SS119	
D1508	8-719-911-19	DIODE 1SS119	
D1509	8-719-110-22	DIODE RD11ES-B2	
D1510	8-719-109-93	DIODE RD6.2ES-B2	
D1511	8-719-110-18	DIODE RD10ES-B3	
D1512	8-719-109-69	DIODE RD3.6ES-B2	
D1513	8-719-911-19	DIODE 1SS119	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1514	8-719-911-19	DIODE 1SS119	
D1515	8-719-109-66	DIODE RD3.3ES-B2	
D1516	8-719-110-13	DIODE RD9.1ES-B2	
D1517	8-719-911-19	DIODE 1SS119	
D1521	8-719-109-92	DIODE RD6.2ES-B1	
D1522	8-719-911-19	DIODE 1SS119	
D1523	8-719-911-19	DIODE 1SS119	
D1524	8-719-911-19	DIODE 1SS119	
D1525	8-719-911-19	DIODE 1SS119	
D1526	8-719-913-44	DIODE ERA82-004	
D1527	8-719-911-19	DIODE 1SS119	
D1528	8-719-110-36	DIODE RD13ES-B2	
D1529	8-719-911-19	DIODE 1SS119	
D1530	8-719-911-19	DIODE 1SS119	
		<IC>	
IC1501	8-759-981-95	IC RC4558S	
IC1502	8-759-981-95	IC RC4558S	
IC1503	8-752-203-00	IC CX22030	
IC1504	8-759-100-60	IC UPC1377C	
IC1505	8-759-509-76	IC XRU4538B	
IC1506	8-759-245-16	IC TC4516BP	
IC1507	8-759-981-95	IC RC4558S	
		<COIL>	
L1501	1-410-464-11	INDUCTOR 3.3UH	
L1502	1-408-080-00	INDUCTOR 100UH	
L1503	1-408-420-00	INDUCTOR 82UH	
		<IC LINK>	
PS1501	1-532-679-00	LINK, IC	
		<TRANSISTOR>	
Q1500	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1501	8-729-904-39	TRANSISTOR DTC114TS	
Q1502	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1503	8-729-904-39	TRANSISTOR DTC114TS	
Q1504	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1507	8-729-900-89	TRANSISTOR DTC144ES	
Q1508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1509	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1510	8-729-904-39	TRANSISTOR DTC114TS	
Q1511	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1512	8-729-801-46	TRANSISTOR 2SC3064-F	
Q1514	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1515	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1516	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1517	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1518	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1520	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1521	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1522	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1523	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1524	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1526	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1527	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1529	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1531	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1532	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1536	8-729-900-36	TRANSISTOR DTC124ES	
Q1537	8-729-900-89	TRANSISTOR DTC144ES	
Q1540	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1541	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1542	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1543	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1544	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1545	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1546	8-729-115-30	TRANSISTOR 2SK105A-30	
Q1547	8-729-900-36	TRANSISTOR DTC124ES	
Q1548	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1549	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1550	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1551	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1554	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1555	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1556	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1557	8-729-900-89	TRANSISTOR DTC144ES	
Q1558	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1559	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1560	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1561	8-729-904-39	TRANSISTOR DTC114TS	
Q1562	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1563	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1564	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1565	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1566	8-729-900-65	TRANSISTOR DTA144ES	
Q1567	8-729-900-89	TRANSISTOR DTC144ES	
Q1568	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1569	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1570	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1572	8-729-900-89	TRANSISTOR DTC144ES	
Q1573	8-729-900-63	TRANSISTOR DTA124ES	
Q1574	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1575	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1576	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1579	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1580	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1581	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1582	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1583	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1584	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1585	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1586	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1587	8-729-900-89	TRANSISTOR DTC144ES	
Q1588	8-729-900-89	TRANSISTOR DTC144ES	
Q1589	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1591	8-729-900-89	TRANSISTOR DTC144ES	
Q1592	8-729-900-89	TRANSISTOR DTC144ES	
Q1593	8-729-900-89	TRANSISTOR DTC144ES	
Q1594	8-729-900-89	TRANSISTOR DTC144ES	
Q1595	8-729-900-89	TRANSISTOR DTC144ES	
Q1596	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1597	8-729-900-89	TRANSISTOR DTC144ES	
Q1598	8-729-900-89	TRANSISTOR DTC144ES	
Q1599	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1600	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1602	8-729-900-65	TRANSISTOR DTA144ES	
Q1603	8-729-900-89	TRANSISTOR DTC144ES	

D2

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R1500	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1501	1-247-891-00	CARBON	330K	5%	1/4W	
R1502	1-249-411-11	CARBON	330	5%	1/4W	
R1503	1-249-417-11	CARBON	1K	5%	1/4W	
R1504	1-249-417-11	CARBON	1K	5%	1/4W	
R1505	1-249-437-11	CARBON	47K	5%	1/4W	
R1506	1-249-437-11	CARBON	47K	5%	1/4W	
R1507⚠	1-215-459-91	METAL	39K	1%	1/4W	
R1508	1-215-459-00	METAL	39K	1%	1/4W	
R1509	1-215-417-00	METAL	680	1%	1/4W	
R1510	1-215-407-00	METAL	270	1%	1/4W	
R1511	1-249-429-11	CARBON	10K	5%	1/4W	
R1512	1-215-434-00	METAL	3.6K	1%	1/4W	
R1513	1-215-436-00	METAL	4.3K	1%	1/4W	
R1514	1-215-436-00	METAL	4.3K	1%	1/4W	
R1515	1-249-429-11	CARBON	10K	5%	1/4W	
R1516	1-249-429-11	CARBON	10K	5%	1/4W	
R1517	1-215-435-00	METAL	3.9K	1%	1/4W	
R1518	1-215-435-00	METAL	3.9K	1%	1/4W	
R1519	1-215-449-00	METAL	15K	1%	1/4W	
R1521⚠	1-215-438-91	METAL	5.1K	1%	1/4W	
R1522	1-247-885-00	CARBON	180K	5%	1/4W	
R1523	1-249-429-11	CARBON	10K	5%	1/4W	
R1524	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1525	1-249-435-11	CARBON	33K	5%	1/4W	
R1526	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1527	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1528	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1529	1-249-437-11	CARBON	47K	5%	1/4W	
R1530	1-249-433-11	CARBON	22K	5%	1/4W	
R1531	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1532	1-215-453-00	METAL	22K	1%	1/4W	
R1533	1-215-467-00	METAL	82K	1%	1/4W	
R1534	1-215-429-00	METAL	2.2K	1%	1/4W	
R1535	1-247-868-11	CARBON	36K	5%	1/4W	
R1536	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1537	1-215-429-00	METAL	2.2K	1%	1/4W	
R1538	1-249-433-11	CARBON	22K	5%	1/4W	
R1539	1-215-452-00	METAL	20K	1%	1/4W	
R1540	1-249-429-11	CARBON	10K	5%	1/4W	
R1541	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1542	1-215-459-00	METAL	39K	1%	1/4W	
R1543	1-249-433-11	CARBON	22K	5%	1/4W	
R1544	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1545	1-249-431-11	CARBON	15K	5%	1/4W	
R1546	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1547	1-215-429-00	METAL	2.2K	1%	1/4W	
R1548⚠		METAL			1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1548				
R1549	1-247-887-00	CARBON	220K	5%	1/4W	
R1550	1-249-433-11	CARBON	22K	5%	1/4W	
R1551	1-249-436-11	CARBON	39K	5%	1/4W	
R1552	1-215-445-00	METAL	10K	1%	1/4W	
R1553	1-249-429-11	CARBON	10K	5%	1/4W	
R1554	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1555	1-249-433-11	CARBON	22K	5%	1/4W	
R1557	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1558	1-249-417-11	CARBON	1K	5%	1/4W	
R1559	1-249-429-11	CARBON	10K	5%	1/4W	
R1560	1-249-435-11	CARBON	33K	5%	1/4W	
R1561	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1563	1-249-429-11	CARBON	10K	5%	1/4W	
R1564	1-249-429-11	CARBON	10K	5%	1/4W	
R1565	1-215-437-00	METAL	4.7K	1%	1/4W	
R1566	1-249-433-11	CARBON	22K	5%	1/4W	
R1568	1-215-439-00	METAL	5.6K	1%	1/4W	
R1569	1-215-480-00	METAL	300K	1%	1/4W	
R1570	1-215-429-00	METAL	2.2K	1%	1/4W	
R1571	1-215-409-00	METAL	330	1%	1/4W	
R1572	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1573	1-247-874-11	CARBON	62K	5%	1/4W	
R1574	1-249-429-11	CARBON	10K	5%	1/4W	
R1575	1-249-433-11	CARBON	22K	5%	1/4W	
R1577	1-247-713-11	CARBON	1K	5%	1/4W	
R1578	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1579	1-247-885-00	CARBON	180K	5%	1/4W	
R1580	1-249-430-11	CARBON	12K	5%	1/4W	
R1581	1-215-429-00	METAL	2.2K	1%	1/4W	
R1582	1-215-428-00	METAL	2K	1%	1/4W	
R1585	1-249-440-11	CARBON	82K	5%	1/4W	
R1586	1-215-411-00	METAL	390	1%	1/4W	
R1587	1-247-723-11	CARBON	6.8K	5%	1/4W	
R1588	1-249-441-11	CARBON	100K	5%	1/4W	
R1589	1-247-903-00	CARBON	1M	5%	1/4W	
R1590	1-215-445-00	METAL	10K	1%	1/4W	
R1591	1-247-891-00	CARBON	330K	5%	1/4W	
R1592	1-215-433-00	METAL	3.3K	1%	1/4W	
R1593	1-247-897-11	CARBON	560K	5%	1/4W	
R1594	1-249-441-11	CARBON	100K	5%	1/4W	
R1596	1-259-878-11	CARBON	1.5M	5%	1/4W	
R1597	1-215-483-00	METAL	390K	1%	1/4W	
R1598	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1599	1-249-435-11	CARBON	33K	5%	1/4W	
R1600	1-249-429-11	CARBON	10K	5%	1/4W	
R1601	1-249-429-11	CARBON	10K	5%	1/4W	
R1603	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1604	1-249-441-11	CARBON	100K	5%	1/4W	
R1605	1-215-449-00	METAL	15K	1%	1/4W	
R1606	1-259-884-11	CARBON	4.7M	5%	1/4W	
R1607	1-215-443-00	METAL	8.2K	1%	1/4W	
R1608	1-215-449-00	METAL	15K	1%	1/4W	
R1609	1-249-433-11	CARBON	22K	5%	1/4W	
R1611	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1612	1-249-433-11	CARBON	22K	5%	1/4W	
R1613	1-249-437-11	CARBON	47K	5%	1/4W	
R1614	1-249-417-11	CARBON	1K	5%	1/4W	
R1615	1-249-433-11	CARBON	22K	5%	1/4W	
R1616	1-215-471-00	METAL	120K	1%	1/4W	
R1619	1-249-437-11	CARBON	47K	5%	1/4W	
R1620	1-249-417-11	CARBON	1K	5%	1/4W	
R1621	1-249-417-11	CARBON	1K	5%	1/4W	
R1622	1-215-459-00	METAL	39K	1%	1/4W	
R1623	1-215-445-00	METAL	10K	1%	1/4W	
R1624	1-249-417-11	CARBON	1K	5%	1/4W	
R1625	1-215-466-00	METAL	75K	1%	1/4W	
R1626	1-215-488-00	METAL	620K	1%	1/4W	
R1628	1-249-435-11	CARBON	33K	5%	1/4W	
R1629	1-249-435-11	CARBON	33K	5%	1/4W	
R1630	1-249-417-11	CARBON	1K	5%	1/4W	
R1631	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1632	1-249-433-11	CARBON	22K	5%	1/4W	
R1633	1-249-417-11	CARBON	1K	5%	1/4W	
R1634	1-249-435-11	CARBON	33K	5%	1/4W	
R1635	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1636	1-249-429-11	CARBON	10K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1637	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1638	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1639	1-249-437-11	CARBON	47K	5%	1/4W	
R1640	1-249-433-11	CARBON	22K	5%	1/4W	
R1641	1-249-429-11	CARBON	10K	5%	1/4W	
R1642	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1643	1-215-445-00	METAL	10K	1%	1/4W	
R1644	1-249-412-11	CARBON	390	5%	1/4W	
R1645	1-249-429-11	CARBON	10K	5%	1/4W	
R1646	1-249-433-11	CARBON	22K	5%	1/4W	
R1647	1-249-417-11	CARBON	1K	5%	1/4W	
R1649	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1650	1-249-429-11	CARBON	10K	5%	1/4W	
R1651	1-249-411-11	CARBON	330	5%	1/4W	
R1652	1-249-437-11	CARBON	47K	5%	1/4W	
R1653	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1654	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1655	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1656	1-249-429-11	CARBON	10K	5%	1/4W	
R1657	1-249-437-11	CARBON	47K	5%	1/4W	
R1658	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1659	1-249-440-11	CARBON	82K	5%	1/4W	
R1660	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1661	1-249-406-11	CARBON	120	5%	1/4W	
R1662	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1663	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1664	1-249-439-11	CARBON	68K	5%	1/4W	
R1665	1-249-439-11	CARBON	68K	5%	1/4W	
R1666	1-249-433-11	CARBON	22K	5%	1/4W	
※R1670	1-214-729-00	METAL	1K	1%	1/4W	
※R1670	1-214-731-00	METAL	1.2K	1%	1/4W	
※R1670	1-214-735-00	METAL	1.8K	1%	1/4W	
※R1670	1-214-737-00	METAL	2.2K	1%	1/4W	
※R1670	1-214-739-00	METAL	2.7K	1%	1/4W	
※R1670	1-214-741-00	METAL	3.3K	1%	1/4W	
※R1670	1-214-743-00	METAL	3.9K	1%	1/4W	
※R1670	1-214-745-00	METAL	4.7K	1%	1/4W	
※R1670	1-214-747-00	METAL	5.6K	1%	1/4W	
※R1670	1-214-749-00	METAL	6.8K	1%	1/4W	
※R1670	1-214-751-00	METAL	8.2K	1%	1/4W	
※R1670	1-214-753-00	METAL	10K	1%	1/4W	
※R1670	1-214-757-00	METAL	15K	1%	1/4W	
※R1670	1-214-761-00	METAL	22K	1%	1/4W	
※R1670	1-214-765-00	METAL	33K	1%	1/4W	
※R1670	1-214-769-00	METAL	47K	1%	1/4W	
※R1670	1-214-773-00	METAL	68K	1%	1/4W	
※R1670	1-214-777-00	METAL	100K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1670				
R1671	1-249-405-11	CARBON	100	5%	1/4W	
R1672	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1673	1-215-470-00	METAL	110K	1%	1/4W	
R1674	1-249-439-11	CARBON	68K	5%	1/4W	
R1675	1-215-417-00	METAL	680	1%	1/4W	
R1676	1-247-700-11	CARBON	100	5%	1/4W	
R1677	1-249-437-11	CARBON	47K	5%	1/4W	
※R1678	1-214-729-00	METAL	1K	1%	1/4W	
※R1678	1-214-735-00	METAL	1.8K	1%	1/4W	
※R1678	1-214-737-00	METAL	2.2K	1%	1/4W	
※R1678	1-214-739-00	METAL	2.7K	1%	1/4W	
※R1678	1-214-741-00	METAL	3.3K	1%	1/4W	
※R1678	1-214-743-00	METAL	3.9K	1%	1/4W	
※R1678	1-214-745-00	METAL	4.7K	1%	1/4W	
※R1678	1-214-747-00	METAL	5.6K	1%	1/4W	
※R1678	1-214-749-00	METAL	6.8K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
※R1678	1-214-751-00	METAL	8.2K	1%	1/4W	
※R1678	1-214-753-00	METAL	10K	1%	1/4W	
※R1678	1-214-755-00	METAL	12K	1%	1/4W	
※R1678	1-214-756-00	METAL	13K	1%	1/4W	
※R1678	1-214-757-00	METAL	15K	1%	1/4W	
※R1678	1-214-759-00	METAL	16K	1%	1/4W	
※R1678	1-214-759-00	METAL	18K	1%	1/4W	
※R1678	1-214-760-00	METAL	20K	1%	1/4W	
※R1678	1-214-761-00	METAL	22K	1%	1/4W	
※R1678	1-214-762-00	METAL	24K	1%	1/4W	
※R1678	1-214-763-00	METAL	27K	1%	1/4W	
※R1678	1-214-764-00	METAL	30K	1%	1/4W	
※R1678	1-214-765-00	METAL	33K	1%	1/4W	
※R1678	1-214-767-00	METAL	39K	1%	1/4W	
※R1678	1-214-769-00	METAL	47K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1678				
R1679	1-249-413-11	CARBON	470	5%	1/4W	
R1680	1-247-897-11	CARBON	560K	5%	1/4W	
R1681	1-249-429-11	CARBON	10K	5%	1/4W	
R1682	1-249-417-11	CARBON	1K	5%	1/4W	
R1683	1-249-439-11	CARBON	68K	5%	1/4W	
R1684	1-249-437-11	CARBON	47K	5%	1/4W	
R1685	1-249-435-11	CARBON	33K	5%	1/4W	
R1686	1-249-430-11	CARBON	12K	5%	1/4W	
R1687	1-249-435-11	CARBON	33K	5%	1/4W	
R1688	1-247-887-00	CARBON	220K	5%	1/4W	
R1689	1-249-435-11	CARBON	33K	5%	1/4W	
R1690	1-249-435-11	CARBON	33K	5%	1/4W	
R1691	1-249-436-11	CARBON	39K	5%	1/4W	
R1692	1-249-429-11	CARBON	10K	5%	1/4W	
R1693	1-249-429-11	CARBON	10K	5%	1/4W	
R1694	1-215-450-00	METAL	16K	1%	1/4W	
R1695	1-249-433-11	CARBON	22K	5%	1/4W	
R1696	1-249-441-11	CARBON	100K	5%	1/4W	
R1697	1-249-414-11	CARBON	560	5%	1/4W	
R1698	1-249-414-11	CARBON	560	5%	1/4W	
R1699	1-249-439-11	CARBON	68K	5%	1/4W	
R1700	1-249-437-11	CARBON	47K	5%	1/4W	
R1701	1-249-433-11	CARBON	22K	5%	1/4W	
R1702	1-249-417-11	CARBON	1K	5%	1/4W	
R1703	1-249-417-11	CARBON	1K	5%	1/4W	
R1704	1-249-439-11	CARBON	68K	5%	1/4W	
R1705	1-249-437-11	CARBON	47K	5%	1/4W	
R1706	1-249-405-11	CARBON	100	5%	1/4W	
R1707	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1708	1-249-440-11	CARBON	82K	5%	1/4W	
R1709	1-249-417-11	CARBON	1K	5%	1/4W	
R1710	1-215-462-00	METAL	51K	1%	1/4W	
R1711	1-249-435-11	CARBON	33K	5%	1/4W	
R1712	1-249-417-11	CARBON	1K	5%	1/4W	
R1714	1-249-411-11	CARBON	330	5%	1/4W	
R1715	1-249-430-11	CARBON	12K	5%	1/4W	
R1716	1-249-437-11	CARBON	47K	5%	1/4W	
R1717	1-249-405-11	CARBON	100	5%	1/4W	
R1718	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1719	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1720	1-249-405-11	CARBON	100	5%	1/4W	
R1721	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1722	1-249-411-11	CARBON	330	5%	1/4W	
R1724	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1725	1-249-440-11	CARBON	82K	5%	1/4W	
R1726	1-249-409-11	CARBON	220	5%	1/4W	
R1727	1-249-435-11	CARBON	33K	5%	1/4W	

• ✱ : Selected to yield optimum performance.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D2 D3

REF.NO.	PART NO.	DESCRIPTION				REMARK
✱R1728	1-247-713-11	CARBON	1K	5%	1/4W	
✱R1729	1-214-762-00	METAL	24K	1%	1/4W	
✱R1729	1-214-763-00	METAL	27K	1%	1/4W	
✱R1729	1-214-764-00	METAL	30K	1%	1/4W	
✱R1729	1-214-765-00	METAL	33K	1%	1/4W	
✱R1729	1-214-766-00	METAL	36K	1%	1/4W	
✱R1729	1-214-767-00	METAL	39K	1%	1/4W	
✱R1729	1-214-768-00	METAL	43K	1%	1/4W	
✱R1729	1-214-769-00	METAL	47K	1%	1/4W	
✱R1729	1-214-770-00	METAL	51K	1%	1/4W	
✱R1729	1-214-771-00	METAL	56K	1%	1/4W	
✱R1729	1-214-773-00	METAL	68K	1%	1/4W	
✱R1729	1-214-775-00	METAL	82K	1%	1/4W	
✱R1729	1-214-777-00	METAL	100K	1%	1/4W	
✱R1729	1-214-781-00	METAL	150K	1%	1/4W	
✱R1729	1-214-785-00	METAL	220K	1%	1/4W	
✱R1729	1-214-787-00	METAL	270K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1729				
R1730	1-259-884-11	CARBON	4.7M	5%	1/4W	
R1731	1-259-882-11	CARBON	3.3M	5%	1/4W	
R1732	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1733	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1734	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1735	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1736	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1737	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1738	1-249-437-11	CARBON	47K	5%	1/4W	
R1739	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1740	1-249-441-11	CARBON	100K	5%	1/4W	
R1741	1-249-437-11	CARBON	47K	5%	1/4W	
R1742	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1743	1-249-433-11	CARBON	22K	5%	1/4W	
R1744	1-249-437-11	CARBON	47K	5%	1/4W	
R1745	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1746	1-249-429-11	CARBON	10K	5%	1/4W	
R1747	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1748	1-249-429-11	CARBON	10K	5%	1/4W	
R1749	1-249-429-11	CARBON	10K	5%	1/4W	
R1751⚠		METAL			1/4W	
R1751	1-214-713-00	METAL	220	1%	1/4W	
R1751	1-214-717-00	METAL	330	1%	1/4W	
R1751	1-214-725-00	METAL	680	1%	1/4W	
R1751	1-214-729-00	METAL	1K	1%	1/4W	
R1751	1-214-733-00	METAL	1.5K	1%	1/4W	
R1751	1-214-739-00	METAL	2.7K	1%	1/4W	
	*1-506-371-00	PIN, CONNECTOR 2P; R1751				
R1752	1-249-437-11	CARBON	47K	5%	1/4W	
R1753	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1754	1-249-437-11	CARBON	47K	5%	1/4W	
R1755	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1756	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1757	1-247-895-00	CARBON	470K	5%	1/4W	
R1758	1-249-458-11	CARBON	8.2	5%	1/4W	F
R1759	1-215-477-00	METAL	220K	1%	1/4W	
R1760	1-215-481-00	METAL	330K	1%	1/4W	
R1761	1-249-417-11	CARBON	1K	5%	1/4W	
R1762	1-249-440-11	CARBON	82K	5%	1/4W	
R1763	1-259-881-11	CARBON	2.7M	5%	1/4W	
R1764	1-249-436-11	CARBON	39K	5%	1/4W	
R1765	1-249-439-11	CARBON	68K	5%	1/4W	
R1766	1-259-881-11	CARBON	2.7M	5%	1/4W	
R1767	1-249-439-11	CARBON	68K	5%	1/4W	
R1768	1-249-417-11	CARBON	1K	5%	1/4W	
R1769	1-249-421-11	CARBON	2.2K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1770	1-249-429-11	CARBON	10K	5%	1/4W	
R1773	1-249-433-11	CARBON	22K	5%	1/4W	
R1774	1-249-437-11	CARBON	47K	5%	1/4W	
R1775	1-249-437-11	CARBON	47K	5%	1/4W	
R1776	1-249-409-11	CARBON	220	5%	1/4W	
R1777	1-249-429-11	CARBON	10K	5%	1/4W	
R1778	1-215-469-00	METAL	100K	1%	1/4W	
R1779	1-215-461-00	METAL	47K	1%	1/4W	
R1780	1-249-417-11	CARBON	1K	5%	1/4W	
R1781	1-249-417-11	CARBON	1K	5%	1/4W	
R1782	1-249-417-11	CARBON	1K	5%	1/4W	
R1783	1-249-437-11	CARBON	47K	5%	1/4W	
R1784	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1785	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1788	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1789	1-215-860-11	METAL OXIDE	33	5%	1W	F
R1790	1-247-887-00	CARBON	220K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV1500	1-228-994-00	RES, ADJ, CARBON 10K
RV1501	1-228-989-00	RES, ADJ, METAL GLAZE 470
RV1502	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K
RV1503	1-228-999-00	RES, ADJ, METAL GLAZE 470K
RV1504	1-228-994-00	RES, ADJ, CARBON 10K
RV1505	1-228-993-00	RES, ADJ, CARBON 4.7K
RV1507	1-228-998-00	RES, ADJ, CARBON 220K
RV1509	1-228-993-00	RES, ADJ, CARBON 4.7K
RV1510	1-228-991-00	RES, ADJ, CARBON 2.2K
RV1511	1-228-998-00	RES, ADJ, CARBON 220K
RV1512	1-228-997-00	RES, ADJ, CARBON 100K
RV1513	1-228-997-00	RES, ADJ, CARBON 100K
RV1514	1-224-253-XX	RES, ADJ, METAL GLAZE 22K
RV1515	1-237-524-21	RES, ADJ, CARBON 1M
RV1516	1-228-995-00	RES, ADJ, CARBON 22K
RV1517	1-228-995-00	RES, ADJ, CARBON 22K
RV1518	1-228-995-00	RES, ADJ, CARBON 22K
RV1521	1-228-997-00	RES, ADJ, CARBON 100K
RV1522	1-228-991-00	RES, ADJ, CARBON 2.2K
RV1601	1-228-995-00	RES, ADJ, CARBON 22K
RV1602	1-228-996-00	RES, ADJ, CARBON 47K

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*A-1341-431-B D3 BOARD, COMPLETE
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	*1-564-511-11	PLUG, CONNECTOR 8P
	*1-564-512-11	PLUG, CONNECTOR 9P
	*1-564-513-11	PLUG, CONNECTOR 10P
	*1-564-516-11	PLUG, CONNECTOR 13P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C2501	1-124-907-11	ELECT	10MF	20%	50V
C2502	1-124-907-11	ELECT	10MF	20%	50V
C2503	1-124-907-11	ELECT	10MF	20%	50V
C2504	1-124-478-11	ELECT	100MF	20%	25V
C2505	1-102-129-00	CERAMIC	0.01MF	10%	50V
C2506	1-108-626-11	MYLAR	0.01MF	10%	100V
C2507	1-102-129-00	CERAMIC	0.01MF	10%	50V
C2508	1-124-910-11	ELECT	47MF	20%	50V
C2509	1-102-115-00	CERAMIC	560PF	10%	50V
C2510	1-124-657-00	ELECT	10MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION				REMARK
C2511	1-124-480-11	ELECT	470MF	20%	25V	
C2512	1-126-101-11	ELECT	100MF	20%	16V	
C2513	1-124-477-11	ELECT	47MF	20%	16V	
C2514	1-101-004-00	CERAMIC	0.01MF		50V	
C2515	1-101-004-00	CERAMIC	0.01MF		50V	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D2501	8-719-911-19	DIODE 1SS119
D2502	8-719-911-19	DIODE 1SS119
D2503	8-719-911-19	DIODE 1SS119
D2504	8-719-911-19	DIODE 1SS119
D2505	8-719-911-19	DIODE 1SS119
D2506	8-719-911-19	DIODE 1SS119
D2507	8-719-911-19	DIODE 1SS119
D2508	8-719-911-19	DIODE 1SS119
D2510	8-719-911-19	DIODE 1SS119
D2511	8-719-911-19	DIODE 1SS119
D2513	8-719-911-19	DIODE 1SS119
D2514	8-719-911-19	DIODE 1SS119
D2515	8-719-911-19	DIODE 1SS119
D2516	8-719-911-19	DIODE 1SS119

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q2501	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2502	8-729-374-02	TRANSISTOR 2SB740-3
Q2503	8-729-900-89	TRANSISTOR DTC144ES
Q2504	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2505	8-729-374-02	TRANSISTOR 2SB740-3
Q2506	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2507	8-729-900-89	TRANSISTOR DTC144ES
Q2508	8-729-374-02	TRANSISTOR 2SB740-3
Q2509	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2510	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2511	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2512	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2513	8-729-900-80	TRANSISTOR DTC114ES
Q2514	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2515	8-729-900-89	TRANSISTOR DTC144ES
Q2516	8-729-900-89	TRANSISTOR DTC144ES
Q2517	8-729-900-89	TRANSISTOR DTC144ES
Q2518	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2519	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2520	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q2521	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q2522	8-729-900-89	TRANSISTOR DTC144ES
Q2523	8-729-900-89	TRANSISTOR DTC144ES
Q2524	8-729-900-89	TRANSISTOR DTC144ES
Q2525	8-729-900-89	TRANSISTOR DTC144ES
Q2526	8-729-900-65	TRANSISTOR DTA144ES
Q2527	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2528	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q2529	8-729-900-89	TRANSISTOR DTC144ES

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2501	1-249-437-11	CARBON	47K	5%	1/4W	
R2502	1-249-437-11	CARBON	47K	5%	1/4W	
R2503	1-249-437-11	CARBON	47K	5%	1/4W	
R2504	1-249-437-11	CARBON	47K	5%	1/4W	
R2505	1-216-471-11	METAL OXIDE	27	5%	3W	F
R2506	1-249-429-11	CARBON	10K	5%	1/4W	
R2507	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2508	1-249-429-11	CARBON	10K	5%	1/4W	
R2509	1-249-440-11	CARBON	82K	5%	1/4W	
R2510	1-249-431-11	CARBON	15K	5%	1/4W	
R2511	1-247-887-00	CARBON	220K	5%	1/4W	
R2513	1-249-429-11	CARBON	10K	5%	1/4W	
R2514	1-249-429-11	CARBON	10K	5%	1/4W	
R2515	1-249-440-11	CARBON	82K	5%	1/4W	
R2516	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2517	1-259-878-11	CARBON	1.5M	5%	1/4W	
R2518	1-249-435-11	CARBON	33K	5%	1/4W	
R2519	1-249-411-11	CARBON	330	5%	1/4W	
R2520	1-249-429-11	CARBON	10K	5%	1/4W	
R2521	1-249-440-11	CARBON	82K	5%	1/4W	
R2522	1-249-429-11	CARBON	10K	5%	1/4W	
R2524	1-249-405-11	CARBON	100	5%	1/4W	
R2525	1-249-436-11	CARBON	39K	5%	1/4W	
R2526	1-249-429-11	CARBON	10K	5%	1/4W	
R2527	1-249-440-11	CARBON	82K	5%	1/4W	
R2528	1-249-429-11	CARBON	10K	5%	1/4W	
R2529	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2530	1-249-429-11	CARBON	10K	5%	1/4W	
R2531	1-247-887-00	CARBON	220K	5%	1/4W	
R2532	1-249-417-11	CARBON	1K	5%	1/4W	
R2533	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2534	1-249-433-11	CARBON	22K	5%	1/4W	
R2535	1-249-439-11	CARBON	68K	5%	1/4W	
R2536	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2537	1-249-405-11	CARBON	100	5%	1/4W	
R2538	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2539	1-249-411-11	CARBON	330	5%	1/4W	
R2540	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2542	1-249-435-11	CARBON	33K	5%	1/4W	
R2543	1-249-439-11	CARBON	68K	5%	1/4W	
R2544	1-249-421-11	CARBON	2.2K	5%	1/4W	
R2545	1-249-411-11	CARBON	330	5%	1/4W	
R2549	1-247-891-00	CARBON	330K	5%	1/4W	
R2550	1-247-891-00	CARBON	330K	5%	1/4W	
R2551	1-249-430-11	CARBON	12K	5%	1/4W	
R2552	1-249-426-11	CARBON	5.6K	5%	1/4W	
R2553	1-249-425-11	CARBON	4.7K	5%	1/4W	
R2554	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2555	1-249-413-11	CARBON	470	5%	1/4W	
R2556	1-247-887-00	CARBON	220K	5%	1/4W	
R2557	1-249-423-11	CARBON	3.3K	5%	1/4W	
R2558	1-249-423-11	CARBON	3.3K	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION
RV2501	1-228-994-00	RES, ADJ, CARBON 10K
RV2503	1-228-999-00	RES, ADJ, CARBON 470K
RV2504	1-228-996-00	RES, ADJ, CARBON 47K
RV2505	1-228-995-00	RES, ADJ, CARBON 22K

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*A-1394-350-A U1 BOARD, COMPLETE
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REF.NO.	PART NO.	DESCRIPTION
	*1-564-506-11	PLUG, CONNECTOR 3P
	*1-564-512-11	PLUG, CONNECTOR 9P
	1-565-269-31	SOCKET, CONNECTOR (D-DUB,L) 9P

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C2001	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2002	1-126-101-11	ELECT	100MF	20%	16V

U1

REF.NO.	PART NO.	DESCRIPTION				REMARK
C2003	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2004	1-123-875-11	ELECT	10MF	20%	50V	
C2005	1-124-477-11	ELECT	47MF	20%	16V	
C2006	1-124-477-11	ELECT	47MF	20%	16V	
C2007	1-124-477-11	ELECT	47MF	20%	16V	
C2010	1-124-902-00	ELECT	0.47MF	20%	50V	
C2011	1-130-728-00	FILM	0.0022MF	5%	50V	
C2012	1-106-359-00	MYLAR	0.0047MF	10%	100V	
C2013	1-124-902-00	ELECT	0.47MF	20%	50V	
C2014	1-124-902-00	ELECT	0.47MF	20%	50V	
C2015	1-124-907-11	ELECT	10MF	20%	50V	
C2016	1-124-902-00	ELECT	0.47MF	20%	50V	
C2017	1-124-907-11	ELECT	10MF	20%	50V	
C2018	1-124-902-00	ELECT	0.47MF	20%	50V	
C2019	1-136-298-00	FILM	0.0033MF	5%	100V	
C2020	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C2021	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C2023	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2024	1-124-120-11	ELECT	220MF	20%	16V	
C2025	1-135-155-21	TANTAL. CHIP	4.7MF	20%	10V	
C2027	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	
C2028	1-126-101-11	ELECT	100MF	20%	16V	
C2029	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2030	1-126-101-11	ELECT	100MF	20%	16V	
C2031	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2032	1-124-126-00	ELECT	47MF	20%	16V	
C2033	1-126-163-11	ELECT	4.7MF	20%	50V	
C2034	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C2035	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C2098	1-163-227-11	CERAMIC CHIP	10PF	5%	50V	
C2099	1-124-907-11	ELECT	10MF	20%	50V	
		<NEON LAMP>				
CF2001	1-519-526-11	LAMP, NEON				
CF2002	1-519-526-11	LAMP, NEON				
CF2003	1-519-526-11	LAMP, NEON				
		<COMPOSITION CIRCUIT BLOCK>				
CP2001	1-232-721-11	COMPOSITION CIRCUIT BLOCK				
CP2002	1-232-096-00	COMPOSITION CIRCUIT BLOCK				
CP2003	1-232-721-11	COMPOSITION CIRCUIT BLOCK				
CP2004	1-232-096-00	COMPOSITION CIRCUIT BLOCK				
		<DIODE>				
D2001	8-719-104-34	DIODE 1S2836				
D2011	8-719-404-46	DIODE MA110				
D2012	8-719-404-46	DIODE MA110				
D2013	8-719-404-46	DIODE MA110				
D2024	8-719-104-34	DIODE 1S2836				
D2030	8-719-104-34	DIODE 1S2836				
D2033	8-719-400-18	DIODE MA152WK				
D2035	8-719-104-34	DIODE 1S2836				
D2040	8-719-104-34	DIODE 1S2836				
D2042	8-719-400-18	DIODE MA152WK				
D2045	8-719-104-34	DIODE 1S2836				
		<IC>				
IC2001	8-759-634-10	IC M52001SP				
IC2002	8-759-931-07	IC SN74LS365ANS				
IC2003	8-759-634-03	IC M54480P				
IC2005	8-759-930-50	IC SN74LS157NS				
IC2006	8-759-930-50	IC SN74LS157NS				
IC2010	8-759-982-05	IC RC7805FA				
		<COIL>				
L2001	1-410-471-11	INDUCTOR	12UH			
		<TRANSISTOR>				
Q2001	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2002	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2003	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2004	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2005	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2006	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2007	8-729-230-46	TRANSISTOR 2SA1162-YG				
Q2008	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2009	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2010	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2011	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2012	8-729-900-53	TRANSISTOR DTC114EK				
Q2013	8-729-901-01	TRANSISTOR DTC144EK				
Q2015	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2020	8-729-900-53	TRANSISTOR DTC114EK				
Q2021	8-729-230-46	TRANSISTOR 2SA1162-YG				
Q2022	8-729-230-46	TRANSISTOR 2SA1162-YG				
Q2024	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2025	8-729-230-49	TRANSISTOR 2SC2712-YG				
Q2095	8-729-900-53	TRANSISTOR DTC114EK				
Q2096	8-729-900-53	TRANSISTOR DTC114EK				
		<RESISTOR>				
R2001	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2002	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2003	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R2004	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R2005	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R2006	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2007	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2008	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2009	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2010	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2011	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2012	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2013	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2014	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2015	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2016	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2017	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2018	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2019	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2020	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2021	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2022	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2023	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2024	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2025	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2026	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2027	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2028	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2030	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2031	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2032	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2033	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2034	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2035	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2036	1-212-958-00	FUSIBLE	10	5%	1/2W	F
R2037	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2038	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2039	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2040	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2041	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2042	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2043	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2044	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2045	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2046	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2047	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2048	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R2049	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2050	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2051	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2052	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2053	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R2054	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R2055	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2056	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2057	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2058	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2059	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2060	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2061	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2062	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2063	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2064	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2065	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2066	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2067	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2068	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2069	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2070	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2071	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2072	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2073	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2074	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2075	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2076	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2077	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2078	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2079	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2080	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2081	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2082	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2083	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2084	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2085	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2086	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2087	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2088	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2089	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2090	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2091	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2092	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R2093	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2094	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2095	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2096	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2097	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2098	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2099	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2100	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R2101	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2102	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2103	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

<VARIABLE RESISTOR>

RV2001	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K

<SWITCH>

S2001	1-572-189-11	SWITCH, PUSH (1 KEY)
S2002	1-571-868-11	SWITCH, PUSH (1 KEY)
S2003	1-571-427-11	SWITCH, SLIDE
S2004	1-571-429-11	SWITCH, SLIDE

<SOCKET>

SP2002	*1-562-994-11	SOCKET, JUMPER CONNECTOR

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MISCELLANEOUS
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⚠1-230-666-41	RESISTOR ASS'Y, HIGH-VOLTAGE
⚠1-426-442-21	COIL, DEMAGNETIZATION
⚠1-450-773-11	TRANSFORMER, POWER
⚠1-451-384-21	DEFLECTION YOKE (Y14FGC3)
1-452-032-00	MAGNET,DISC
⚠1-526-954-11	INLET, AC
1-537-207-21	TERMINAL BOARD ASS'Y, U
1-544-252-11	SPEAKER
*1-568-507-11	CONNECTOR, BRIDGE 15P
⚠8-738-259-01	PICTURE TUBE 14FGE

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ACCESSORIES & PACKING MATERIALS
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⚠1-590-151-11	CORD SET, POWER
3-754-392-11	MANUAL, INSTRUCTION
*4-034-604-01	INDIVIDUAL CARTON
4-384-027-01	BAG, PROTECTION
*4-397-134-01	CUSHION (UPPER) (ASS'Y)
*4-397-135-01	CUSHION (LOWER) (ASS'Y)